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ABSTRACT

Early in 1967, the Office of Economic Opportunity was authorized to formulate and carry out programs for the prevention of narcotic addiction and the rehabilitation of narcotic addicts. Such programs were required to include provisions for the detoxification, guidance, training and job placement of narcotic addicts. The programs were aimed at persons addicted to narcotics who were residents of areas with a high incidence of poverty. Eight agencies were awarded grants for initiating or continuing progress to combat narcotics addiction. Each program was encouraged to develop an evaluation package of its own design in additon to participating in a uniform, nationwide evaluation effort. This report includes: (1) descriptive summaries of the eight programs; (2) guidelines for considered judgments as to incidence of addiction, characteristics of addicts, and relapse rate and the factors affecting it; (3) evaluation of the overall effectiveness of the various programs; and (4) data concerning the costs in dealing with addiction. The report concludes with suggestions for future research. (SJL)

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Uniform Evaluation of Programs to Combat Narcotic Addiction

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FINAL REPORT

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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FRIENDS OF PSYCHIATRIC RESEARCH, INC.
Baltimore, Maryland 21228

UNIFORM EVALUATION OF PROGRAMS TO COMBAT NARCOTIC ADDICTION

FINAL REPORT
June 30, 1970

CONTRACT NO. OEO-4210
OFFICE OF ECONOMIC OPPORTUNITY

FRIENDS OF PSYCHIATRIC RESEARCH, INC.
BALTIMORE, MARYLAND 21228

The research reported herein was performed pursuant to a contract with the Office of Economic Opportunity, Executive Office of the President, Washington, D.C. 20506. The opinions expressed herein are those of the author and should not be construed as representing the opinions or policy of any agency of the United States Government.

To
Richard H. Meacham
who, although otherwise unmentioned,
was largely responsible for whatever
measure of success the project achieved.

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I. GENERAL DESCRIPTION OF PROJECT

A. Background

Early in 1967, the Office of Economic Opportunity was authorized under provisions of the 1966 amendments to the Economic Opportunity Act of 1964 to "...formulate and carry out programs for the prevention of narcotic addiction and the rehabilitation of narcotic addicts." In addition, such programs were required to include "...provisions for the detoxification, guidance, training, and job placement of narcotic addicts." Such programs were to be (a) aimed at residents of areas with a high incidence of poverty; and (b) aimed at persons addicted to the use of narcotic drugs, specifically, cocaine and opium, and their derivatives and synthetic equivalents such as heroin, morphine, meperidine, methadone, codeine, dihydrocodeinone, dihydromorphinone, and paregoric. Users of other drugs, such as the amphetamines and barbiturates, were also to be involved in these programs whenever the use of such drugs could lead to narcotic addiction.

Under the terms of the above authorization, the Office of Economic Opportunity awarded grants-in-aid to eight agencies in the United States and Puerto Rico for the purpose of initiating or continuing programs to combat narcotic addiction. These OEO-funded Narcotic Centers were located in Los Angeles, California; Washington, D.C.; Chicago, Illinois; New Jersey (statewide); New York City, New York; Puerto Rico (the entire Commonwealth); San Antonio, Texas; and Tacoma, Washington. Some of these Narcotic Centers were initiated with grant-in-aid funds; for the remainder of the centers, the grant-in-aid represented the continued funding of an on-going narcotic program.

As specified by the legislation, such programs were to be part of a more comprehensive endeavor which would include the elements of prevention, detoxification, guidance, training, and job placement. An additional requirement for support was that provision be made for adequate follow-up and evaluation of individuals receiving services (or otherwise involved) within the framework of a given program, so that an objective assessment of the over-all nature, scope, utility, and/or effectiveness of each program could be achieved. To further this end, grantees were encouraged to propose and include an evaluation package of their own design. In addition, their participation in a uniform, nationwide evaluation effort was required, for which the necessary protocol and materials were to be provided. Grantees were responsible for obtaining all data necessary for the evaluation aspect, including adequate follow-up on all addicts who participated in the program, however briefly.

The legislation authorizing funds for the above narcotic centers required OEO to engage an organization, independent of the federal government, to perform an overall evaluation of the eight centers funded. In essence, this organization was required to collect "...a body of data which may provide guidelines for considered judgments as to incidence of addiction, characteristics of addicts, relapse rate and the factors affecting it, overall effectiveness of the various programs,

and the costs involved in dealing with addiction." To achieve these ends, the Office of Economic Opportunity contracted with Friends of Psychiatric Research, Inc. (FPR), a non-profit organization, with offices in Baltimore, Maryland.

B. Physical Facilities

The building located at 38 Bloomsbury Avenue in Catonsville, Maryland was selected as the project site and readied for occupancy during July, 1967. Office equipment to accommodate the staff and the incoming data was obtained, and activities were fully underway as of July 12, 1967. During the succeeding months, IBM unit record equipment was ordered. The first machines were installed during November, 1967 (two IBM keypunches, two IBM verifiers, and one IBM sorter).

Pre-test data forms from the San Antonio, Texas program were hand-tabulated prior to the installation of the equipment. All computer processing was done out-of-house until August, 1968, at which time an IBM 1130 computer was installed to permit data processing on the premises. Alterations to accommodate the computer were made with no significant disruption of activities. In summary, within a one-year period, project operations progressed from (a) hand-tabulation to (b) machine tabulation with out-of-house data processing to (c) in-house data processing of all incoming OEO data. Analyses and reports were prepared on a monthly basis as well as on special request from OEO.

C. Staff

Staff job descriptions were written, and personnel were selected from within FPR or from new applicants. The following is a list of past and present personnel associated with the project:

Project Directors:	Georgia-Lee V. Agallianos, Ph.D. Lloyd W. Jones, B.S., C.P.A. John W. Shaffer, Ph.D.
Administrative Assistant:	Claire P. Evans
Research Psychologists:	Elsie L. Ferguson, Ph.D. James A. Forbes, M.S. J. Michael Leibowitz, B.A.
Research Assistants:	Douglas G. Coster, B.S. Thomas H. Crook, B.S. William L. Greve Alice F. Lawrence, B.S. Wayne G. Towns, B.S.
Data Coordinators:	Dorothy C. Dear Patricia E. Fleury

Scientific Programmers:	Victor T. Lukas, M.A. Richard F. Ulrich, B.A. James F. Williams, M.A. Barry B. Woodward
Operations Supervisors:	Jesse J. Fleury, III Earl B. Jordan Michael J. Vantucci
Secretaries:	Doretha M Brown Charlotte B. Clifford Susan J. Lukas Anastasia Sviatopolk-Mirski
Keypunch Operators:	Virginia Atkinson Linda T. Keller Deborah W. Webster

D. Staff Training

Staff training, an important part of the project from the very beginning, was intended to improve both efficiency and morale. In addition, it enabled personnel to gain insight into the various phases of the data collection; it developed staff for vacancies at higher level positions; and it provided a cohesive force to shape the project into a smoothly-functioning operation.

II. DESCRIPTIVE SUMMARIES OF EIGHT OEO-FUNDED NARCOTIC PROGRAMS

A. Introduction

This chapter is intended to provide a brief description of each of the eight, OEO-funded, narcotic rehabilitation programs. It must be emphasized that these descriptions are based on relatively brief and infrequent site visits which occurred at irregular intervals throughout the period of funding. Also included are descriptive material provided by the programs themselves in their original proposals.

It was the intention of the Office of Economic Opportunity to encourage each program to institute methods and procedures that would permit maximum utilization of existing facilities and focus on those problems endemic to its area. There were great differences in territorial scope: two programs were state-wide; three were city-wide; two focused on neighborhoods within large cities; and one was a regional program located in a small city.

Under the terms of the OEO contract, staff personnel of FPR were to visit each site periodically. The purposes of these visits were to train interviewers in the actual administration of the data collection forms, to discuss and alleviate problems concerning data collection, and to evaluate the total functioning of each program.

Initial site visits were made during July and August of 1967. These initial visits were to acquaint FPR with each of the programs and to report to OEO-Washington what progress had been made in dealing with existing, or potential, problem areas. At least one training visit was made to each program. The number of visits was dictated by several variables, primarily the turnover in program personnel and the quality and amount of data received.

Each training site visit began with a brief explanation of FPR's role in relation to both the program and to OEO. A short description of the history and purpose of the data collection instruments was also given. An item-by-item discussion of both forms ensued, followed by a question and answer period.

The average time spent in training interviewers at each site visit was approximately one and one-half days. Emphasis was placed on following instructions meticulously so that between-program data would be comparable and consistent. The procedure for forwarding data to FPR was explained in detail. As a result of these visits, many valuable recommendations were received. The visits also afforded opportunities to discuss openly any problems or misconceptions that existed with regard to data collection.

Additional site visits were arranged whenever serious problems arose concerning any aspect of the data collection. Visits of this nature are termed "administrative" in this report even though some training of interviewers may also have been accomplished. Administrative site visits were made to several programs, following which an increase in the accuracy and completeness of the data forwarded was noted.

On August 8 and 9, 1968, as part of FPR's continuing effort to improve the quality of the data collected, a workshop was held in Baltimore. These sessions were co-sponsored by the Office of Economic Opportunity. Each program was asked to send at least two representatives. The workshop opened with a general information session which was followed by a tour of the data processing facility. Following this, two concurrent sessions were scheduled. The first was for personnel concerned with data collection and correction and offered intensive instruction concerning the "error-messages" from the computer-prepared Edit Program. Samples were made available as illustrations. The second session was designed for program personnel concerned with research. Representatives from OEO and FPR were available to discuss various research aspects, and the monthly Client Information Summary was developed as a result of this meeting. The opportunity to meet and discuss problems and exchange ideas was rated mutually beneficial by those who participated.

B. Descriptions of Individual Programs

Program #1: Los Angeles, California

The Los Angeles program was centered in Boyle Heights, a low-income Mexican-American neighborhood. The program proposed to use ex-addict, neighborhood residents as case workers operating out of a store-front center.

The initial FPR site visit was made on August 15, 1967. This visit included inspection of the central offices of the Economic and Youth Opportunity Agency of Greater Los Angeles (EYOA). Also visited was the site for the Narcotics Center in Boyle Heights which was being renovated at the time. In addition, the Salvation Army Half-way House was inspected as it appeared that the program might make use of this facility on a contractual basis.

The school drug prevention materials discussed in the Los Angeles proposal had not yet been prepared at the time of the first visit. Plans to work with Synanon had been dropped because of a reluctance on the part of the latter to have their program evaluated. Progress had been slow as all necessary approvals had not yet been secured. One problem concerned the implementation of the data collection forms, since some members of the research staff were not entirely satisfied with the forms as a research tool. The Los Angeles staff were also concerned about the security of the data as well as the necessity for completing forms on each addict who used any of the program services. Therefore, the definition of an "Admission" was a point of controversy between the program staff and FPR. FPR accordingly recommended that OEO explain to the Los Angeles program personnel their obligation to participate in the Uniform Data Collection. In addition, FPR requested clarification of the aims and services of the program because of apparent departures from the original protocol.

On November 16 and 17, 1967, Los Angeles was again visited by representatives of FPR. At this meeting the stringent California narcotics laws were discussed. Program staff members stated that detoxification was being done in private homes since many addicts refused to use hospital facilities--the civil commitment law required them to register with the authorities before being treated. The fact that the program had not lost any of its ex-addict staff members was considered a favorable sign that ex-addicts could be motivated to assume responsibility.

A training session was also held during this visit at the storefront on Echandia Street in Boyle Heights. There was great difficulty in assuring the ex-addicts that all information obtained would be kept confidential. Subsequent to this visit, FPR recommended an intensive in-service training program.

In the months that followed, the data received from Los Angeles were extremely poor. Many clerical errors were noted, and the number of Form I's received was considerably less than the number of addicts allegedly admitted to the program. From FPR's standpoint, therefore, the data collected were sub-standard in both quality and quantity. In August, 1968, Los Angeles sent two representatives to the FPR Data Collection Workshop. However, no significant improvement in data collection was subsequently noted.

On May 21-23, 1969, four representatives from FPR visited the program in order to test the FPR-OEO designed Site Visit Protocol, then in the draft stage, and intended for use by site visit teams in evaluating mental health programs. Miss Jungblut, the OEO Program Coordinator, was present during this visit. A discrepancy between the staff's actual functions and the negative impression received from their participation in the Uniform Data Collection became apparent. Program officials informed FPR that there were some 150 active clients in the program, and that these persons were being seen at least two and as many as five to six times per month. The forms previously received by FPR suggested that only a fraction of this number was participating in the various activities offered by the center. Representatives from FPR were favorably impressed by several aspects of the Los Angeles program as observed, among which were the following:

a. The staff of ex-addict counselors appeared to be well-trained, highly motivated, and efficient in dealing with the addict population.
b. The program of vocational rehabilitation seemed commendable, utilizing a graduated scale of job placement as the client proved himself.
c. Satisfactory client and program records appeared to be maintained although this was not reflected in the data collection forms.
d. Greater willingness to cooperate with FPR visitors was observed since the last site visit.
e. Efforts had been made to expand the services of the

Narcotics Center by enlisting the cooperation of two local hospitals to assist in the care of addicts.

As a result of the discussions held, it was decided that data collection would be handled by one individual, whose responsibility would be to collect and forward accurate and complete forms to FPR. It was hoped that data collection and transmittal would be greatly improved with the addition of a coordinator to the Los Angeles staff.

By way of further information, staff members reported that the program was experiencing considerable difficulty with members of the board of the delegate agency, the Narcotics Symposium. Fortunately, the performance of the program did not seem to be affected. Relations with the community were also satisfactory, and there appeared to be no problems with the police.

At the time of the final site visit, Los Angeles appeared to have one of the most efficient and productive programs.

Program #2: Washington, D.C.

The Washington, D.C. program was located in an impoverished, predominantly Negro area in the Northwest section of the nation's capital. The original proposal under which this program was funded grew out of a report of a subcommittee appointed by the Committee on Laws Pertaining to Mental Disorders of the Judicial Conference of the District of Columbia Circuit. This subcommittee was charged with the responsibility of conducting a study concerning drug addiction and the rehabilitation of drug users. Among its recommendations were that a research-oriented, community treatment facility be established to deal with drug addiction. This program was intended to supplement the efforts of law enforcement and other agencies concerned with drug addiction and related misuse of dangerous drugs. As other programs had done, the Washington, D.C. program utilized ex-addicts in every phase of its rehabilitative efforts and established detoxification and job development procedures to meet the needs peculiar to its area.

Staff of FPR made an initial site visit to the Washington Narcotics Program on August 9, 1967. At that time, the most pressing problem was the review and approval by the D.C. Board of Commissioners of the contract between the United Planning Organization (UPO) and the D.C. Department of Public Health. The site selected for the center was at 1515 U Street, N.W. in Washington, D.C., but no half-way house sites were proposed for lease at that time. A contract coordinator had been chosen by UPO to work with Mr. Tatham of the D.C. Department of Public Health. A program director had been tentatively selected and efforts made to assemble an Advisory Council and Advisory Committee. The use of the D.C. General Hospital had been secured for detoxification on a contractual basis. Urinalyses were to be done by the Bureau of Laboratories of the Department of Public Health. Arrangements had been made with George Washington University's Education Research Project to fulfill contractual research requirements stated by OEO.

On March 11, 1968, a second visit was made to the Washington Drug Addiction Center which was now located at 1825 13th Street, N.W. This facility, formerly a hotel of approximately 40 rooms, was to be used for detoxification, treatment, and administration. Staffing was almost complete, and Mr. Atkinson, the program director, was satisfied with the personnel selected. The physical facilities seemed to be adequate but in need of some renovation. Admission procedures had begun: one addict was enrolled in the program. Other addicts were being screened for proper motivation. Detoxification of heroin users was being conducted on an out-patient basis, and barbiturate withdrawal was being treated at D.C. General or St. Elizabeth's hospital. Two half-way houses, to be operated by the Bureau of Rehabilitation, were in the planning stages. Referrals were expected from the parole system as well as from the "grapevine." Proposed research by George Washington University had been abandoned primarily because the D.C. program's professional Advisory Committee seriously questioned the value of a short term local evaluation in addition to that conducted by OEO-FPR. There was a short orientation for the staff regarding the data collection forms, and another meeting was arranged for March 22, 1968, in order to begin training. On that date, FPR representatives trained a group of 11 ex-addict interviewers. The FPR representatives felt that good rapport existed among all persons concerned.

On June 14, 1968, another meeting was held at the Washington center in order to clarify questions concerning the use of Form I and Form II. The interviewers claimed to be unaware that Form I and Form II, Evaluation 1, were to be filled out at the same time. FPR staff were informed that rapport was good with police, and that ex-addict staff members were being engaged to speak to community groups. This had been the only public education on drug abuse thus far in Washington.

One representative from the Washington program attended the OEO-FPR Workshop in Baltimore in August, 1968.

In September, 1968, it became increasingly evident that the activities performed by the Washington program were not being accurately reflected in the forms submitted to FPR. The interviewers in Washington were not impressed with the necessity for completing forms on each client in the program and left many incomplete items on both forms at the initial interview. Mr. Slaughter, chief social worker at the D.C. program, was invited to bring the interviewers to Baltimore so that they could tour FPR's facilities and thereby appreciate the potential value of the data collected on the forms.

Several subsequent meetings were held with personnel from the Washington program, each geared to reinforce form completion procedures. However, submission of data from the D.C. program remained below standard in both quality and quantity.

The program facilities were moved to a new location by the end of 1969. This center, at 1400 Q Street, has not been visited by FPR staff.

Program #3: Chicago, Illinois

The Chicago program was located in an impoverished, predominantly Negro section known as the Mile Square area. The objectives of this program were to establish a neighborhood-focused information and education center with detoxification facilities and extended rehabilitative care; to offer assistance to other community agencies in undertaking work with addicts; and to provide public education in an effort to prevent drug addiction. The Chicago program headquarters were located at St. Leonard's House which was founded in 1954 to assist ex-prisoners in their transition from prison to the free community. Over the years, St. Leonard's House has gained the respect of the people in the community and at the time of funding had the reputation among the delinquent population of being a source for help. The Chicago program provided in-patient detoxification followed by residential care; heavy reliance was placed on treatment groups led by ex-addicts. A store-front for intake and information was located one block from St. Leonard's House.

FPR's initial site visit to Chicago was made on August 17, 1967. Representatives of FPR visited St. Leonard's House at 2100 Warren Avenue as well as the out-patient facility at 2110 Warren Avenue. A building proposed for client intake was also viewed. Staff acquisition and training was in progress. A detoxification program had been arranged with the Illinois Masonic Hospital, and trinalyses were to be performed by the University of Chicago on a contractual basis. At that time, data collection seemed to be a problem for staff members. However, the visitors felt that the program was making good progress.

On November 13-14, 1967, a training site visit was made to Chicago. Objections by program staff members to the forms ranged from fear that information would not be held confidential to proposed changes in the drug classifications as they appeared on the OEO-FPR forms. Most objections were overcome by an explanation of the intent and purpose of each item, and Miss Salyer, the administrator, assured the FPR representatives that the OEO-FPR forms would be completed and forwarded. The staff requested enough forms to submit information from cases seen since the program's inception. It was noted that renovations to the programs's facilities were under way and clients were being admitted to the program. Substitute drug maintenance therapy had not begun since no decision had been made concerning the drug to be used.

On April 25, 1968, an additional training session was conducted primarily because of staff turnover since the previous training session. Two minor problems were discussed. These were the high staff turnover rates and the problem of the mandatory, one-week residence for detoxification. The residence requirement seemed to present a hardship for married addicts and contributed to the drop-out rate. As definite plans for completing and forwarding of forms were set up at this time, FPR anticipated that the quantity of the data collected would improve.

Two representatives from Chicago attended the OEO-FPR Workshop in Baltimore during August, 1968. However, data collection from Chicago continued to be rather sporadic.

An administrative site visit was made during July, 1969, and data collection procedures were again emphasized. During October, 1969 the newly appointed project director visited the Baltimore facility. Following these contacts, data collection stabilized noticeably.

Program #2: New Jersey (Statewide)

Four county centers and a central state component comprised the New Jersey program. Hudson and Essex counties encompass the major cities of northern New Jersey (Newark and Jersey City). Middlesex and Monmouth counties were included because of recent increases in drug use in these localities. The specific aim of the state component was to provide state leadership, facilities, and personnel for an expanded and diversified, yet integrated, effort to control and prevent addiction, particularly in areas of high incidence. As in other programs, the use of ex-addicts in most phases of the program was pervasive. County aims were similar. The Hudson and Essex county programs shared a remodeled Job Corps Center as a residential facility staffed by ex-addict and professional personnel. Middlesex and Monmouth counties had separate, smaller facilities.

On August 16, 1967, an initial site visit was made to New Jersey. At the time of this visit, interviews were being conducted to fill the positions of Program Director and Research Director for the state component. The facilities that FPR personnel saw in Trenton were those of the Department of Community Affairs (DCA) and the Department of Institutions and Agencies. FPR representatives attended a meeting of the Board of the Hudson County Delegate Agency, TELOS, held at St. Peter's College. A possible site for a half-way house was viewed in North Bergen. Finally, the Office of Community Affairs Legal Services was visited in Union City. Three clinics had been established for medical and follow-up care, and two others were expected to be ready by September, 1967. It was felt at the conclusion of the initial site visit that the New Jersey program was cognizant of existing problems and taking steps toward solving them.

A training site visit was made on January 15, 1968 by four representatives of FPR. The training session went very smoothly as Mr. Leiberman, the Research Director, had considerable experience with data collection forms. No interviewers were present at this meeting. Many specific questions concerning the forms were raised and answered.

A second training site visit was made on March 15, 1968 to train a number of interviewers. Two problems were discussed at length by Mr. Brill, the Program Director: the ability of interviewers to collect reliable information, and an expected lack of police cooperation. FPR was informed that an out-reach center had been opened in Hudson county and staff were being recruited for the program.

A member of the program's research team attended the OEO-FPR Workshop in Baltimore during August, 1968.

A later site visit on October 18-19, 1968, was of an administrative and training nature. Representatives from all four counties were present at the New Jersey Regional Drug Abuse Agency (Liberty Park), a former Job Corps Center located in an unpopulated area near the Hudson River. The complete plant was observed. It was learned that although Hudson county was originally to have four out-reach centers, they had but two: one in Union City and one in Jersey City. An up-to-date progress report was given by the project staff and included the following information:

a. The administrative offices had been moved to a site at Liberty Park as of July, 1968. This site, formerly used by the Job Corps, consisted of approximately 12 buildings and was being rented from the Federal government. This afforded great possibilities for improving the functioning of the program.
b. General administrative changes in the program had occurred during the past months, and a new program director had been appointed. A revised work statement and protocol had been developed by the program director; a copy of which was made available to the FPR representatives.
c. A social work supervisor had been appointed to assume responsibility for the overall collection and correction of the forms for both Essex and Hudson counties.
d. A central file was to be established for all client records for both counties.
e. Plans were under way to add several rooms for in-patient care. Beds were already available and a treatment room was being prepared. Five nurses had been hired for around-the-clock coverage.
f. Plans were made to detoxify ten addicts at one time while housing a total of 50 addicts from all four counties. The following facilities were available: vocational office, gym, dormitories, workshop, educational building, and dining area.

A five-hour training session was held and all problems dealing with form completion were discussed. Mrs. Grace Leslie, the representative from Monmouth county, was present for the entire session. She was provided with data collection material since Monmouth county expected to begin services to clients shortly. The FPR representatives felt that this meeting was of great value since it established a first and, hopefully, mutually satisfactory contact with this particular segment of the New Jersey program.

Mr. Alicki, Director of the Middlesex county component, attended the session at Liberty Park also. On Saturday, October 19, 1968, FPR representatives met again with Mr. Alicki at the Middlesex county location. The facilities there included six offices and a gym. Three

ex-addicts were on the staff. The center's hours were 9:00 A.M. to 5:00 P.M., and night care was provided one night a week. The Daytop-Phoenix House concept was to be followed with addict residency to start by January 1, 1969. Out of more than 20 referrals, there were about six clients in the program at that time. Detoxification was carried out at the Neuro-Psychiatric Institute, a state facility where addicts stay for one week. This entailed difficulties since, in accordance with New Jersey law, the Institute must fingerprint and identify all addicts admitted, a procedure which tends to alienate the addict. Plans for the future included a prevention and education program which would be made available to public officals (school superintendents, principals, sheriffs, etc.). Mr. Alicki was presenting educational talks to teenagers every other Friday.

The New Jersey site was again visited in October, 1969, and the program staff assisted FPR personnel in up-dating records. A training session was provided and the staff was extremely cooperative during the entire visit. FPR staff felt that the New Jersey program was well run and seemed to fulfill its aims and purposes. Data received from all New Jersey locations reflected active client intake and involvement.

Program #5: New York City, New York

New York City has the greatest number of narcotic addicts in the country, and many are concentrated in predominantly Negro and Puerto Rican sections. The OEO-funded Comprehensive Program for the Rehabilitation and Prevention of Drug Addiction in New York was created to fight the drug problem endemic to this area. Its components were intended to provide for the induction of addicted persons into rehabilitation, for their re-entry into society following treatment, and for a variety of prevention efforts. Subsidiary programs were included to involve the relatives and employers of addicts as well as interested citizens. The basic conceptual framework of the program, i.e., to confront addicts with the evidence of their non-productive attitudes, was applied consistently throughout. In addition to its operational aspects, the program included components for training, evaluation, central administration, and program direction.

During the period of data collection, the New York program had more than 30 components of the following types: store-fronts, residential care units, job training centers, and administrative offices. As of December 31, 1969, 2,300 addicts had utilized the New York program's facilities.

The initial FPR site visit to New York took place on August 18, 1967. The clients at Phoenix House were friendly, helpful, and enthusiastic about their program. At that time there were three community orientation centers functioning: Encounter, in Greenwich Village; Brownsville Community Orientation Center, in Brooklyn; and the South Brooklyn Orientation Center. In the planning stage were a center in East Harlem and two community orientation centers in the Lower East Side of Manhattan. Several day care units were functioning under OEO

contract or with other funds. Several treatment centers (Phase II of the program) were also available in various parts of the city. At that time, a major problem was one of funds verification which was delaying the hiring of qualified staff. The New York staff expressed willingness and desire to have their program evaluated and agreed to cooperate fully in completing the OEO-FPR forms. Three levels of addict intake were defined by the New York program, and plans were made to have the OEO-FPR forms completed during the second, or "descriptive work-up," phase.

On January 17-18, 1968, a training site visit took place to acquaint the New York staff with the use of the data collection forms. The forms were discussed on an item-by-item basis, and although the group was largely composed of ex-addict interviewers who are, in general, chary of bureaucratic procedures, no difficulties were encountered. The interviewers were very interested and attentive, asking pertinent questions as the forms were discussed. The confidential aspects of the form information were detailed, and the New York staff seemed satisfied with the explanation of FPR's security procedures. As it was noted that the forms required by NIMH and other Federal and municipal agencies contained items similar or identical to those of the OEO-FPR forms, it was suggested that the OEO-FPR forms be used exclusively, thus cutting down the paper work done by the interviewers. Since not all the phases of the New York program were funded by OEO, a question was raised about which phases should participate in the data collection. FPR requested that OEO-Washington clarify which phases should participate and which addicts should be included. The need was apparent for better communication between FPR and the New York program. It was suggested that a staff member for liaison be appointed in New York who would be responsible for all correspondence between FPR and the New York program. Additional consideration was given to establishing an in-house team to coordinate the data collection from phase to phase.

The FPR representatives also visited the Juvenile Education and Prevention Unit (JEPU) at Mott Haven Health Center. It was noted that New York's problems were typical of programs of this size and scope with a lack of communication between individual components and outside agencies.

Three members of the New York staff attended the Workshop in Baltimore during August, 1968.

No subsequent visits were made to the New York program. Representatives from the program, however, came to Baltimore during January, 1969. A large scale up-dating of records by the New York program caused a deluge of forms to descend on Baltimore during that month. It is difficult to state whether or not the number of forms received from this program does, in reality, reflect the actual client load.

Program #6: Puerto Rico

The program in Puerto Rico was funded by OEO to increase the size and scope of the rehabilitation facilities in existence on the island. The OEO funds were to be used for the implementation of island-wide store-front induction centers staffed by ex-addicts. Other goals were the introduction of youth- and prisoner-oriented rehabilitative programs again utilizing ex-addicts in a therapeutic community setting. The extent to which these aims were realized is difficult to ascertain since data from these centers are lacking. This was due partly to a delay in supplying the Spanish forms and largely to the reluctance of the Puerto Rican staff to use the OEO-FPR forms in order to keep accurate and detailed records of their interviews with addicts. Regrettably, the data received from Puerto Rico was so meagre that analysis was virtually impossible. Subsequently, the Puerto Rican program ceased to be funded by OEO and no more data were collected.

On August 14-15, 1967, two representatives of FPR made an initial site visit to Puerto Rico. At that time the program was operating as a combined effort of two agencies: APRA was responsible for prevention and rehabilitation, and CISLA operated the treatment program. Although the program was functioning, the outlying store-fronts needed additional space and the offices of APRA were overcrowded.

The data collection forms had to be translated into Spanish which caused considerable delay as it was necessary for each English version to be approved by OEO and then translated into Spanish. In order to make final revisions, the forms had to be recalled from the printer, revised, translated into Spanish, returned to the printer, and sent on to the program. An additional problem was the difference of opinion over the advisability of filling out Form I on initial contact with the addict.

On January 22-25, 1968, five FPR representatives, including a Spanish-speaking interviewer and a Puerto Rican psychiatrist as consultant, visited the Puerto Rican program for the purpose of training staff members in the use of the data collection forms. On January 23, fifteen CISLA interviewers, primarily semi-professionals, were trained, and on the 24th, a total of 30 ex-addicts were trained in the use of Form I and Form II. FPR representatives discussed with Mr. Ricci, the administrative assistant, the method of collecting and forwarding the OEO-FPR forms to Baltimore.

In the months following the training site visit, no gains were made in effective data collection. The forms received from the Puerto Rican program were of such poor quality that further training seemed mandatory.

At the request of OEO, Puerto Rico was instructed to send those individuals directly responsible for form completion to a training conference held in Baltimore during August, 1968. However, the only person to attend was Dr. Morales, who was unable to participate in the

seminar on form completion. It became apparent that another training site visit was necessary in order to elicit usable data. Shortly thereafter, however, FPR was notified that Puerto Rico was no longer being funded by OEO.

Program #7: San Antonio, Texas

The San Antonio program has been operated by the Patrician Movement, an organization formed in 1959, with the aim of rehabilitating narcotic addicts in a low-income Mexican-American area of the city. Initial dissemination of information about the program was carried by the "grapevine" -- addicts usually came to the program on their own volition. A social worker would obtain a complete case history from the client and members of his family; then a complete medical work-up was done to determine whether or not the addict should be hospitalized. Addicts who were already hospitalized were reached by the program's social workers. Job training and placement was carried out by the vocational rehabilitation section of the Texas Education Agency. Since San Antonio had a successful on-going program, it was selected for the initial testing of OEO-FPR data collection forms.

The initial FPR site visit to San Antonio was made on July 31 and August 1, 1967. A tour was made of the slum "target area." The following three facilities were viewed:

a. The Patrician Movement's "Operation Chaps" center, a private house which had been converted into offices.
b. A workshop facility one and one-half blocks away from the center. The workshop consisted of two store-fronts, the smaller being used for storage of materials and completed products, and the larger being the actual workshop equipped with both power and hand woodworking tools.
c. The Santa Rosa Medical Center, a modern hospital with excellent facilities. Addicts to be detoxified could be placed in either semi-private rooms or wards.

A training site visit was made on November 21-22, 1967. Father Brosnan, the Program Director, brought the FPR representatives up to date on the progress made by his organization. The following were his comments:

a. According to Texas state laws, the program cannot hire a physician. However, some special arrangements had been made with two physicians to administer to the program's patients on a private basis.
b. The program was continuing to have good relationships with law enforcement and community agencies.
c. Group meetings of addicts were being held at the hospital every Tuesday. The workshop group was meeting twice each week. Meetings with the families of newly hospitalized addicts were being held. Friday afternoon group sessions were instituted for female patients who could not come in the evenings.
d. All detoxification was being done by the Santa Rosa Medical Center which cooperated fully with the program. One of the

many services the hospital supplied was to ensure that Father Brosnan could be reached via radio receiver 24 hours a day for any emergency.

e. By trial and error, it had been discovered that the patients admitted to the Santa Rosa Medical Center for detoxification did best when they were scattered in beds throughout the hospital. The stigma of addiction seemed thereby minimized.

f. As many as 30 urinalyses per week were then being done, free of charge, at the Fort Worth U.S.P.H.S. Hospital.

On February 26-27, 1968, an administrative visit to San Antonio was made to resolve several misunderstandings regarding data collection. Approximately 50% of the forms sent by San Antonio were found to be incomplete and marked "Lost to Follow-Up." The FPR representatives explained the log sheet used by FPR, and program staff members agreed that a very large number of forms sent to FPR were of no value for the collection of valid data. Since FPR compiled its log sheet in a very comprehensive form, it was agreed that a photo-copy of this log be forwarded to assist the San Antonio personnel with procedures for compiling their own list of patients that lacked evaluation forms. As these forms were completed only by social workers, FPR members met with them and asked them for their viewpoints. The following day was spent in devising a form to aid program personnel in reporting additional staff activities.

Two members of the San Antonio staff attended the OEO-FPR workshop in Baltimore in August, 1968. Data received from the San Antonio Program have remained constant in number and quality, and all contacts have been extremely satisfactory.

Program #8: Tacoma-Pierce County, Washington

The Tacoma-Pierce County program was developed by the Community Action Agency (CAP) in an attempt to coordinate the efforts of the health department, the police department, and school system. At the time of funding, there was a half-way house with a capacity for 21 clients. The administrative offices, shared with CAP, were located in downtown Tacoma about one mile from the half-way house. Detoxification was carried out at a local hospital and usually required five days.

The Tacoma-Pierce County program has developed an extensive prevention and education component. It is estimated that about 60,000 people in the area have received drug education and information via television specials, motion pictures, school curriculum development, lectures, and assorted publications. The Narcotics Program Board consisted of an economic and social cross-section of 30 local people from the police department, the health department, the courts, the medical associations, and the school system. The Tacoma-Pierce County program had also applied for state aid which would enable its scope to enlarge from a community to a state-wide program by July, 1970.

An initial site visit was made by FPR on August 10-14, 1967. The facilities seen were:

a. Community Mental Health Clinic
b. Proposed detoxification ward at Western State Hospital
c. Proposed facilities for group therapy at Western State Hospital.
d. Proposed facilities for thin-layer chromatography laboratory at Western State Hospital.
e. Hilltop Multi-Service Center.

The first training site visit was conducted on November 15, 1967. It was learned that since the initial site visit, Dr. Zylstra had been appointed and approved as program director; Mr. Roberton had received his immigration visa; and additional personnel had been hired. FPR representatives also attended a monthly meeting of the Narcotics Program Board. At that time, a crisis-intervention telephone system, which would be available on a 24-hour basis and constitute an important phase of the program, was discussed. Community contacts were also said to be improved, and publications were planned to bring the program to the attention of all local agencies.

Two members from the Tacoma-Pierce County program attended the OEO-FPR workshop in Baltimore in August, 1968.

On May 20, 1969, four representatives from FPR together with Miss Edith Jungblut, OEO Program Coordinator, visited the Tacoma program. Both the administrative offices on Commerce Street and the half-way house on Fawcett Street were inspected.

Although the forms received by FPR from Tacoma during the summer of 1969 were complete and accurate, they were very few in number. However, the value of this program must be viewed from two perspectives: Education/Prevention and Rehabilitation/Treatment. The educational aims seemed well carried out. Information about the program and about drug use in general was disseminated to schools, churches, civic groups, private industry, and the general public through speeches and newsmedia. Treatment and rehabilitative aspects, however, fell below FPR's expectations. There were, at the time of the site visit, only ten addicts being treated in the half-way house, three of whom had been heroin users. The prognosis for in-house residence ranged from six months to two years, and it appeared that very little incentive for rehabilitation was being offered. Although the nature of the group approach may place narrow limits on the numbers treated at the center, there were an estimated 12,800 poor people who were expected to be reached and who could possibly have used the treatment facilities. It appeared that a greatly expanded effort should be made to contact and recruit the hard narcotic users from the poverty areas of this region.

In the fall of 1969, it became apparent that program intake had increased. Both quantity and quality of data submitted to FPR has remained relatively satisfactory since that time.

III. DEVELOPMENT OF DATA COLLECTION FORMS

The Office of Economic Opportunity's intention to perform a systematic evaluation of eight different narcotic programs was the first major project of this nature: prior research efforts have been more limited in scope. It was anticipated that the experience gained from the present project would be invaluable in the development of future nation-wide narcotic evaluation systems. A key feature of any such evaluation system is, of course, the availability of suitable data collection instruments.

The development of sensitive and appropriate measures by which a number of different narcotic programs scattered throughout the United States and Puerto Rico could be uniformly and adequately assessed was a forbidding problem. Among the more obvious difficulties encountered were the following: 1) The funded programs differed widely in their approach, nature, and scope so that no completely uniform technique of data gathering or program evaluation could be entirely appropriate in all cases. 2) Personnel involved in data collection varied in degree of training and competence, thus restricting the kinds of data that could be collected as well as their reliability and validity. 3) The several programs differed with respect to amount of contact with the addict, his family, and his friends, again limiting the kinds and amounts of information uniformly available. 4) Since, (a) reliable baseline data of incidence of relapse were unavailable, (b) utilization of suitable control groups was not feasible, and (c) cross-program comparison was largely vitiated by a host of confounding variables, a scientifically meaningful evaluation of the worth, import, or effectiveness of the several programs was unlikely to be achieved. The most that could be expected was a body of data which would provide the guidelines for reasoned judgments as stated in Chapter I.

A. Background and Assumptions

In the discussion that follows, the term instrument is used in a generic sense to refer to any of several, more-or-less formal, structured, data-gathering techniques. Such techniques could include anything from an intake form on which only demographic data are recorded to a highly standardized psychological test. Certain such instruments are of proven worth and are readily available; others have to be devised to meet the needs of specific situations.

With respect to the present problem, any instrument selected or devised could be classified into one of two types according to its primary purpose: 1) a type intended to provide descriptive or demographic data concerning the addicts treated; and 2) a type designed to provide measures of change or improvement over time as the addict progresses through the treatment program offered. In brief, the former might be termed descriptive and the latter, evaluative. It is, of course, entirely possible for certain instruments to serve in a dual capacity.

In an effort to exploit the full potential of the situation, it seemed reasonable to attempt to collect the greatest amount of accurate information possible. Unfortunately, the choice of question or item content was severely curtailed by two basic considerations: 1) The programs involved were primarily treatment-oriented rather than research-oriented; hence, the amount of staff time available for other than rudimentary data collection was sharply limited. 2) Collection of certain types of information requires specific and extensive training on the part of personnel involved. This requirement entails special problems of its own.

In view of the foregoing, it was considered wisest to assign a priority to the various types of information to be gathered.

1. High Priority Descriptive. These consisted of items such as sex, type and degree of addiction, information concerning past abstinence and relapse, work history, criminal record, and the like. Every effort was made to emphasize the importance of the accuracy (and legibility) of the recorded information. In brief, these items were intended to provide demographic and descriptive data concerning the addicts treated.

2. High Priority Evaluative. These consisted of items in a variety of problem areas together with a brief description of the nature of the treatment received and the degree of participation by the addict in the program. In brief, these items were designed to reflect change or improvement in the addict or in his life situation during the course of his participation. Ideally, it was hoped that evaluations would be made on admission to the program as well as at regular intervals thereafter, so that any exacerbation or lessening of the problems involved could be discerned and charted over time. As will be made clear in the chapter dealing with results, this ideal proved impossible to achieve in the overwhelming majority of instances.

It was recognized that neither the descriptive nor the evaluative data could be of any value unless a high degree of accuracy with respect to both reporting and recording was assured. Such assurance is best obtained through the employment of competent and conscientious personnel to gather and record the necessary information. Cross-checking of information for accuracy is also helpful.

B. Development of Data Collection Forms

In keeping with the above assumptions, limitations, and guidelines, two separate forms were developed: one intended primarily to provide descriptive or demographic data concerning the addicts treated; and one which would attempt to provide indices of change or improvement as the addicts progressed through the treatment program offered.

Over a period of several months, two data collection forms were devised by Friends of Psychiatric Research in cooperation with the Office of Economic Opportunity. In the course of their development, these forms were changed many times in content and format.

Form I (Descriptive Information) was designed primarily to collect demographic and descriptive data on all clients participating in the OEO-funded narcotic programs. It was administered once (on admission) to every addict participating in an OEO-funded program, since it was considered essential to get an accurate description of addicts being treated at the various centers. In addition, the possible discovery of client variables, or characteristics, associated with successful treatment outcome would be of value in the development of more efficient and appropriate treatment programs. Finally, the form was administratively useful inthat it provided a case record for each individual treated, and the information obtained provided data for the Management Information Report (M.I.R.) forwarded monthly to OEO.

Form II (Evaluative Information) was designed primarily to collect data which might be sensitive to change or improvement during the course of a client's participation in a program. Certain of the items appeared on questionnaires used in other studies of narcotic addiction. Other items were devised by the personnel of FPR and OEO.

Form II was to be administered at repeated, equally-spaced intervals (once every four weeks) to every client, thus permitting an addict to be followed through the course of treatment. Data of this nature would thus permit an evaluation of the effects of treatment over a period of time. In conjunction with the information obtained on Form I, data from Form II might also permit more definitive statements concerning the relationship between addict characteristics and response to treatment programs.

C. Pre-testing of Forms

After several revisions, both forms received tentative approval from OEO. It was decided that they should be pre-tested at the Narcotic Center in San Antonio, Texas ("Operation Chaps"). The purpose of pre-testing was to determine if content and format were conducive to the efficient collection of data.

On July 31, 1967, and August 1, 1967, the staff of "Operation Chaps" were briefed by FPR personnel on the development and administration of the forms. Between August 2, 1967, and August 31, 1967, thirty-three (33) clients (29 males and 4 females) were interviewed. The data were summarized and each item was re-evaluated.

The present version of the forms was agreed upon in December, 1967. These were distributed to all programs to begin data collection as of March, 1968. During this period, San Antonio continued to collect data on the pre-test forms.

Subsequent to final approval of the forms, FPR trained personnel at all narcotic centers in their use. Forms and instructions were translated and printed in Spanish for use in Puerto Rico as well.

D. Submission of Data.

After completion, the face sheet (top copy) of each form was retained by the treatment center and the second copy was sent to FPR. This information was keypunched and subsequently stored on disk files. These files were then used, in conjunction with appropriate computer programs, to summarize the information collected and to perform pertinent statistical analyses.

E. Security and Confidentiality.

While at FPR, the completed forms were stored in locking file cabinets, and only authorized personnel had access to them. Likewise, all cards and disk files were stored in locking cabinets.

Both Form I and Form II request the name, address, and social security number of the addict being interviewed. The copies received by FPR contained only a four letter name code and the social security number, the latter being one of the surest means of identification without using the family and given name. The letter code, the client's social security number, and the case number (assigned by the treatment center) were used solely for record matching purposes (forms received). Only through an identification procedure of this nature could a client's data be stored systematically.

F. Volume of Forms

In order to insure the availability of adequate personnel and equipment to handle incoming data, estimates were made of the number of forms to be received from each program. On December 9, 1967, a letter was sent to each program director requesting an estimate of his case load and drop-out rate. Replies were subsequently received from Chicago and Tacoma and estimates were based on this information. Estimates for San Antonio were based on the rate at which pre-test data were received. Estimates for New York were based on information supplied in their proposal. No detailed estimates could be made for the remaining programs. For these programs, OEO estimates of the number of persons to be served were used to calculate the total number of forms expected to be received each month.

CHAPTER III

APPENDIX A

DATA COLLECTION FORMS I AND II (ENGLISH LANGUAGE VERSION)

DATA COLLECTION FORMS I AND II (SPANISH LANGUAGE VERSION)

IV. ROUTINE MONTHLY PROCESSING

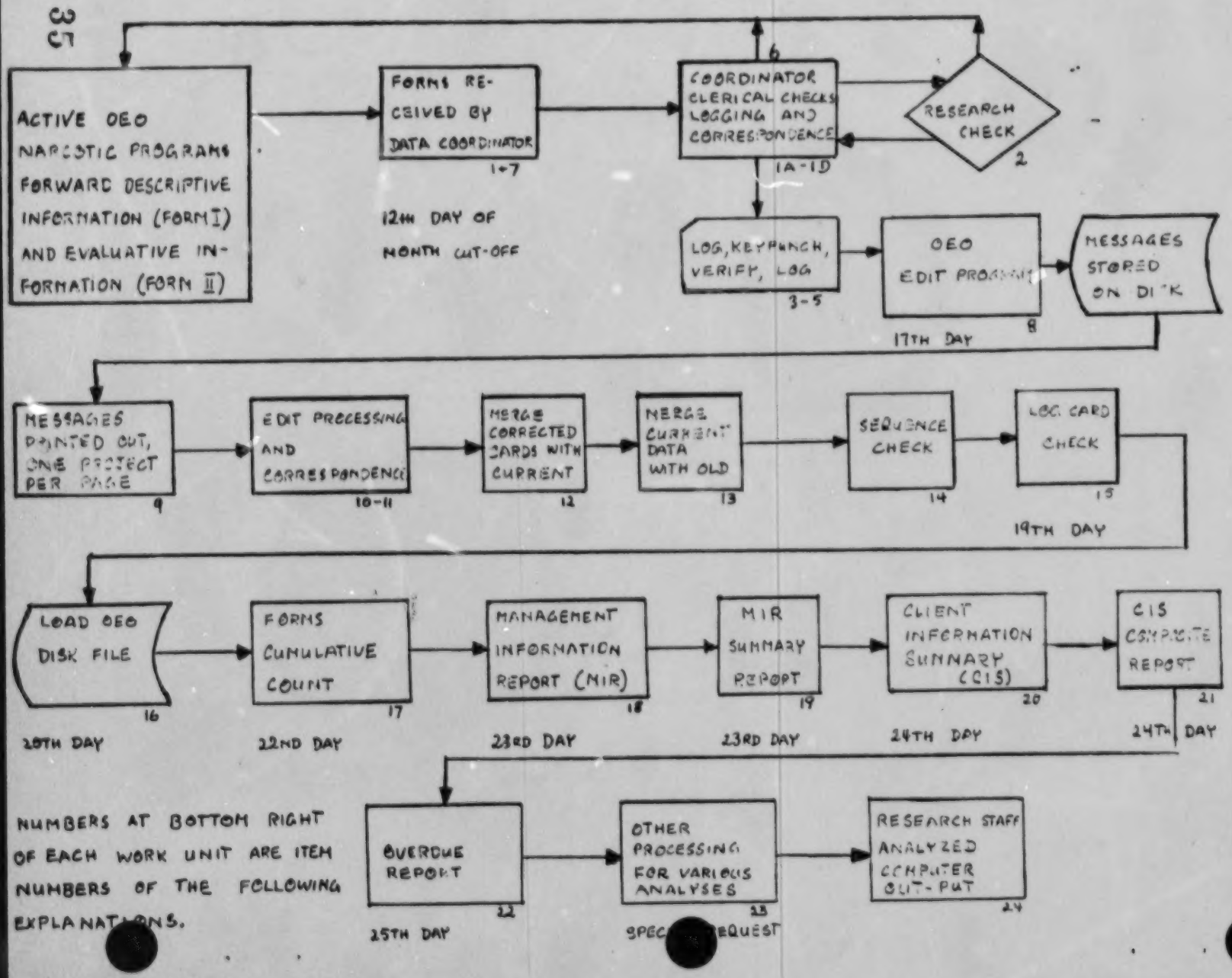
A. Overview of Routine Monthly Processing

As stated in Chapter III, a Form I and a Form II were to be completed on each client at the time of initial contact. Additional Form II's were to be administered at four week intervals over the period the client remained in the program. These forms were to be forwarded monthly to FPR for editing, keypunching, and up-dating of a master file from which statistical analyses would later be made.

In order to maintain an accurate data base, both a manual and a computer "Edit" program were developed. The manual edit consisted of counting and recording forms received in a separate log book for each program. All data were scrutinized for completeness and irregularities. Errors noted were resolved by direct communication with the program involved. In those cases when errors could not be resolved, the questionable form was not processed thereby maintaining the integrity of the data base. The computer Edit program performed an additional search for inconsistent and/or illogical coding. The listing produced by the computer was reviewed by research assistants and the required corrections were made.

As part of the monthly processing, four information reports were generated: (1) a Management Information Report, which displayed key demographic data and provided information as to client characteristics; (2) a Client Information Summary, which in addition to key demographic data provided specially requested tables on selected variables; and (3) a Forms Count by Month, which indicated the intake rate of each project and the number of follow-up evaluations completed.

In addition, the monthly processing included the creation of an Overdue Forms Report, which was forwarded to the programs. This report indicated those clients which had been active prior to the current month's processing but for whom no Form II had been received.


C9
C7
ACTIVE OEO NARCOTIC PROGRAMS FORWARD DESCRIPTIVE INFORMATION (FORM I) AND EVALUATIVE INFORMATION (FORM II)
FORMS RECEIVED BY DATA COORDINATOR
1-7
12TH DAY OF MONTH CUT-OFF
6
COORDINATOR CLERICAL CHECKS LOGGING AND CORRESPONDENCE
1A-1D
RESEARCH CHECK
2
LOG, KEYPUNCH, VERIFY, LOG
3-5
OEO EDIT PROGRAM
8
17TH DAY
MESSAGES STORED ON DISK
MESSAGES PRINTED OUT, ONE PROJECT PER PAGE
9
EDIT PROCESSING AND CORRESPONDENCE
10-11
MERGE CORRECTED CARDS WITH CURRENT
12
MERGE CURRENT DATA WITH OLD
13
SEQUENCE CHECK
14
LOG CARD CHECK
15
19TH DAY
LOAD OEO DISK FILE
16
20TH DAY
FORMS CUMULATIVE COUNT
17
22ND DAY
MANAGEMENT INFORMATION REPORT (MIR)
18
23RD DAY
MIR SUMMARY REPORT
19
23RD DAY
CLIENT INFORMATION SUMMARY (CIS)
20
24TH DAY
CIS COMPOSITE REPORT
21
24TH DAY
NUMBERS AT BOTTOM RIGHT OF EACH WORK UNIT ARE ITEM NUMBERS OF THE FOLLOWING EXPLANATIONS.
OVERDUE REPORT
22
25TH DAY
OTHER PROCESSING FOR VARIOUS ANALYSES
23
SPEC[illegible] REQUEST
RESEARCH STAFF ANALYZED COMPUTER OUT-PUT
24

C. Details of Routine Monthly Processing (Flowchart Explanation)

In cooperation with the Office of Economic Opportunity and the seven active drug programs, Friends of Psychiatric Research, Inc. implemented the following data handling and report processing system.

1. All forms were to be received by the 12th of each month from each of the seven active programs. The data coordinator had the responsibility for performing the following clerical checks.
   a. Stamp date received on each form.
   b. Count all forms (number of Forms I's and number of Form II's) and log into the Comprehensive Forms Received Log.
   c. Separate forms with major errors from others (illegible, missing program and case number, duplicate forms, missing date and letter code, missing classification of client). Check over-all readibility of forms.
   d. Log correct forms into each individual program's log book. Correct any inconsistencies in date or evaluation number, if possible. All correct forms were initialed by the data coordinator. All incorrect forms were returned to the program with the data coordinator's comments for correction. The 12th day of each month was designated as the cut-off date for intake of the previous month's data from the programs.
2. Forms were then forwarded to the research staff who performed the following item-by-item check.
   a. Form I

Item	Check
14,15	An item coded as "other" should be verified as indeed not a specific category.
16A-16B	Is specific denomination indicated?
17	If over eight years are indicated, a type of school should be circled.
21A-21B, 35	Job coding--a specific job must be indicated (not an industry).

   b. Form II

Item	Check
18A-18B	Job coding--a specific job must be indicated (not an industry).
23	If coded as "other" should be verified as indeed not a specific category.

   c. On both Form I and Form II, all information should be legible and not extend beyond the line. Research staff initialed all correct forms and returned them to the data coordinator.

3. Correct forms were then logged into the machine room log for processing.
4. Keypunching and verification specifications were followed, and the cards (Form I on yellow, Form II on manila) were filed for future processing. The 15th day of each month was designated as the completion deadline for all previous month's keypunching and corrections.
5. The forms were next logged out of the machine room and forwarded to the data coordinator who filed the original in sequence by program and case number.
6. All incorrect forms were returned to the programs by the data coordinator with comments and/or reasons for rejection.
7. Corrected forms were received by the data coordinator and processed as 3-4 above.
8. OEO Edit--The current data were used as input to the Edit program. The messages stored on disk were related to inconsistencies, impossible coding, and questionable responses (see Appendix A).
9. Edit messages were printed by the Edit program and a copy was forwarded to each related program. The 17th day of each month was designated as the completion date for edit processing.
10. Each program either corrected or confirmed the data referred to on the message print-out. Corrections were sent by the programs to FPR.
11. The data coordinator corrected the original forms and sent the correction sheet (message print-out) to keypunching.
12. The OEO-files supervisor made sure that cards to be corrected were pulled from the card files and that corrections were made. The corrected cards were then merged with current data cards.
13. The current data were then merged with the Master File of all OEO data.
14. A sequence check was then performed on the entire file. All duplicates were removed. If duplicate cards were caused by duplicate forms, the latter were returned to the program.
15. The Log-Card-Check--The Log Simulator Program produced a listing by program of all case numbers received and the date of interview for each evaluation. This listing was utilized as an internal check to match data cards with the original log of forms received.
16. The new Master File of all OEO data was then loaded onto the disk and the data cards were stored until the next monthly up-date. A sample of each program's data was listed from the disk as an added precaution to insure the disk file's accuracy. The 20th day of each month was designated as the cut-off date for loading OEO-disk files.
17. Forms Cumulative Count--This program accumulated the current total number of forms received. Each month of program activity was listed and a copy was forwarded to each program and to OEO. The 22nd day of each month was designated as the cut-off date for completion of the forms cumulative count.

18. Management Information Reporting (M.I.R.)--This report was prepared on a monthly basis and contained information related to client status in the program and selected demographic information (see Appendix B). A copy of each program's (M.I.R.) activity was forwarded to OEO. The 23rd of each month was designated as the cut-off date for completion of the M.I.R.

19. An M.I.R. Summary Report of all programs was also prepared and forwarded to OEO (see Appendix B). The 23rd of each month was also the cut-off date for completion of the M.I.R. Summary Report.

20. Client Information Summary (C.I.S.)--The C.I.S. was also prepared on a monthly basis and contained information related to client status in program and one-way frequencies of selected variables (see Appendix C). Each program received a copy of its own C.I.S. report.

21. A C.I.S. Composit Report of all programs was prepared and forwarded to OEO (see Appendix C). The 24th of each month was designated as the cut-off date for completion of processing necessary to prepare the C.I.S.

22. Overdue Report--This program prepared a listing of all client case numbers that had been inactive in their evaluation for a specified time period. A copy of this report was forwarded to the programs who were to respond with the back log of evaluations or provide information related to the clients' status (e.g.; deceased, drop-out). A copy of this listing was also sent to OEO. The 25th day of each month was designated as the cut-off date for forwarding overdue reports (see Appendix D).

23,24. Data Processing and Analysis--Two-way frequency tables were programmed for variables specified by OEO. From the tabulations, FPR obtained a profile of the most frequent type of addict in each of the various programs.

CHAPTER IV

APPENDIX A

EXPLANATION OF EDIT PROGRAM

Edit Program

I. INTRODUCTION

As the first step in the electronic processing of the data collected by FPR in the OEO Drug Abuse Evaluation Project, an Edit Program has been developed to detect both improbabilities and errors in incoming data. This program checks each item individually for:

a. Missing or invalid codes (e.g., if sex is to be coded one or two for male or female, a five in this item would be invalid).
b. Consistency with other items (e.g., if a person is living with husband or wife in Item 11A, Form II, he cannot be unmarried in Item 12).
c. Impossibilities (e.g., the number of days worked during the past four weeks may not be greater than 28).
d. Improbabilities (e.g., if computations using present age and longest time in jail indicate that the individual has been in jail since age 8, this would be considered highly improbable and confirmation would be requested).

A print-out created by this program, listing all questionable responses will be sent to each program for correction or confirmation.

As previously stated, not all items listed by the Edit Program will be mistakes: but each one should be examined carefully to insure that the data obtained is recorded as accurately as possible.

II. GENERAL INSTRUCTIONS FOR COMPLETING THE EDIT PROGRAM MESSAGE SHEET CORRECTION COLUMN

The example below presents a sample error message.

Each message in the print-out specifies nine separate headings related to the error. The format of the print-out is as follows:

1	2	3	4	5	6	7	8	9
11	INVALID BIRTH DATE	1	0001	2	002	11	0092	03

1. the error message number
2. the error message

3. form number
4. case number
5. project number
6. interviewer's number
7. question number
8. data entry being questioned
9. evaluation number

Space is provided to the right of each error message for the correct data to be inserted by program personnel. There are three possible entries that may be placed in space available for correction:

1.) If data entry being questioned is indeed correct write the words "Confirmed as _____," in the space provided for correction.

(Example)

							#8 data	correction
11	INVALID BIRTH DATE	1	0001	2	002	11	0092	CONFIRMED YEAR OF BIRTH AS 92

2.) If data is incorrect place correct data in space provided for correction.

(Example)

							#8 data	correction
11	INVALID BIRTH DATE	1	0001	2	002	11	0092	46

3.) If for some reason the correct data is unavailable, this fact should be indicated by writing the word "Unavailable" in the space provided.

(Example)

							#8 data	correction
11	INVALID BIRTH DATE	1	0001	2	002	11	0092	UNAVAILABLE

UNDER NO CIRCUMSTANCES IS A SPACE FOR CORRECTION OR CONFIRMATION TO BE LEFT BLANK

There are certain types of entries which will automatically produce error messages. Three of the major types are listed below, and may be regarded as general causes of an error message. Thus, Invalid Sex Code may result from the box being left blank, from an entry number different than the possibilities called for in the item, or from use of letter rather than number codes. (See examples.)

1.) If letters are placed in boxes that call for numbers only and vice versa.

(13) Sex: 1-Male, 2-Female [A]

2.) Entering numbers which are outside coded possibilities.

(13) Sex: 1-Male, 2-Female [4]

3.) Incomplete entries in which all blanks are not filled.

(5) Today's Date [ ][7][1][6][8]

In the specific instructions below, it should be kept in mind that the instructions given for checking the error usually refers to the most likely source of error, but is not necessarily the only source of error. Carefully review all possible sources of error in each item in making your corrections, and refer back to original instructions.

III. SPECIFIC INSTRUCTIONS FOR THE COMPLETING OF THE EDIT PROGRAM MESSAGE PRINT-OUT

FORM I

.01 Invalid program number--Item #1 should only be coded 1-8.
Refer Inst. I #1

.02 Invalid form number--This error message concerns procedures at our office--Please disregard.

.03 Missing card 1--Same as error message .02.

.04 Missing card 2--Same as error message .02.

.05 Case number out of sequence--Same as error message .02.

.06 Missing or invalid date--Months and days under 10 must be preceeded by a zero [0][6][0][9][6][8]
month day year
No month can exceed 12, no day can exceed 31.
Refer Inst. I #4

.07 Missing letter code--Letters only are to be used in question 5B. Be sure that all boxes are filled.
Refer Inst. I #5B

.08 Missing interviewer code--Interviewer's special code must be entered in the blocks of Item 9A.
Refer Inst. I #9A

.09 Invalid ex-addict code--0 and 1 are the only choices for 9B.
Refer Inst. I #9B

.10 Invalid type admission code--Numbers 1 through 7 only are to be entered in this box. All types of admission can be designated by numbers 1 through 7.
Refer Inst. I #10

.11 Invalid birth date--Since the likelihood that a client is under 8 years old or over 75 years is minimal, it is requested that in these cases you write "Confirmed year of birth as _____".
Refer Inst. I #11

.12 Invalid place of birth--Appropriate number 1 through 6 to be entered in 12B. All possibilities fall within the 6 choices.
Refer Inst. I #12B

.13 Invalid sex code--Only 1 or 2 to be entered on question 13.
Refer Inst. I #13

.14 Invalid racial group--Only numbers 1 through 5 are to be entered. If 5 is entered, check "Specify".
Refer Inst. I #14

.15 Invalid ethnic group--Only numbers 0 through 5 are to be entered. If 5 is entered, check "Specify".
Refer Inst. I #15

.16 Race and ethnic groups inconsistent--Check 14 and 15 for contradictions. An example of this inconsistency would be a person who considered himself an Oriental-Italian. We would consider this highly improbable. Also check 14 and 15 "Specify" for duplication. For apparent inconsistencies between 14 and 15 please check and write "Confirming, ethnic and race are correct".
Refer Inst. I #14 and 15

.17 Invalid religious preference--Only possibilities are 0 through 6. Specify for all entries except 0.
Refer Inst. I #16A

.18 Invalid religious background--Only possibilities are 0 through 6. Specify for all entries except 0.
Refer Inst. I # 16B

.19 Education level greater than 25--The probability of a client having over 25 years education is minimal. If he does however, you are requested to write "Confirming education _____ years".
Refer Inst. I #17

.20 Invalid military code--The possibilities are from 0 through 6. Only one of these should be entered in Item 18.

Refer Inst. I #18

.21 Time worked at one job is greater than maximum--Error is printed when length of time worked exceeds difference between present age and 16. If client began work at the job before he was 16, please write "Confirming time worked at one job _____".

Refer Inst. I #17

.22 Invalid Social Security number--Since all Social Security numbers have nine digits, empty boxes will be error coded.*

Refer Inst. I #20

.23 Invalid primary job code--Possibilities for entry are 1 through 0. Be sure to specify job name. For code refer to Hollingshead--Two Factor Index of Social Position.

Refer Inst. I # 21A

.24 Invalid highest level job training--Possibilities are the same as above. Be sure to specify. For code refer to Hollingshead--Two Factor Index of Social Position.

Refer Inst. I #21B

.25 Primary job and training code inconsistent--The client may be working at a job level (21A) lower than his training or experience (21B), but by definition he cannot be working at a job level higher than his experience. Therefore, Item 21A must be equal to or less than Item 21B. Item 21B must be equal to or greater than Item 21A.

Refer Inst. I #21A and B

.26 Total number of offenses incorrect--22A and C cannot disagree by more than 10%.

.27 Longest period in jail greater than maximum--Item #23 must be equal to or less than client's age minus 8 years.

Refer Inst. I #23

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* According to the Social Security Administration, not all possible numbers have been issued. Therefore, an error code is printed for non-issued number. You are asked to verify the S.S. no. If correct S.S. no. is unattainable write "Unavailable" in space provided.

.28 Longest time off drugs too great--Client cannot be off drugs for longer period than his duration of drug use (defined as current age minus age of first drug use).

Refer Inst. I #24, 28C

.29 Past drug use less than present--Past use boxes on Item #28C always refer to maximum use of drug before entrance into program; therefore, past use must always be equal to or greater than present use.

Refer Inst. I #28C

.30 Age drugs first used less than 8 years--It is assumed for this project that the client did not begin using drugs before age 8. If, however, the client did start on drugs before 8 years, please write "Confirming age first used as _____ years".

Refer Inst. I #28C

.31 Drug usage code and earliest age inconsistant--If 0 is entered in present use and past use frequency then it follows that N.A. should be entered in age first used. If no past use is indicated and frequency 1, 2, or 3 is entered in present use; then the age first used must be the client's age at the time of interview.

Refer Inst. I #28A, B, C

.32 Invalid code for client using drugs by vein--Possibilities are 0 and 1 only.

Refer Inst. I #29

.33 Invalid code for person starting addict--Possible choices are 0 through 6. All other entries will be error coded. If 6 is entered, be sure that you have specified the item.

Refer Inst. I #30A

.34 Invalid code for description of starter--Possible choices are 0 and 1. All other entries will be error coded.

Refer Inst. I #30B

.35 Invalid code for reason on drugs--Possible choices 1 through 6. All other entires will be error coded. Specify for (6) "Other".

Refer Inst. I #31

.36 Invalid drinking habit code--Possible entries 0 through 3. Usage description must be within these choices. Other entries will be error coded.

Refer Inst. I #32

.37 Living condition and description of parents inconsistent--Possibilities are 0 and 1. Other entries will be error coded. An error message will also appear when inconsistent choices are made in Item #33. (e.g., It is improbable that a client lived most of the time, until he was 18, with his father and step-father.)
Refer Inst. I #33

.38 Invalid code for description of parents--Possible entries are 1 through 6. Other entries will be error coded. Error message occurs when improbabilities exist between 33 and 34.
Refer Inst. I #34

.39 Invalid code for father's job--Possible entries are 1 through 0. Other entries will be error coded.
Refer Inst. I #35

.40 Invalid medical information code--Possible entries are 0 through 3. Other entries will be error coded.
Refer Inst. I #36

FORM II

.41 First evaluation missing on Form II--This message indicates our office cannot locate a Form II, Evaluation 01 for specified case #_____. You are requested to locate and forward duplicate of this Form II, Evaluation 01.

.42 Invalid evaluation number--Only numbers 01-99 could possibly be placed in this Item. Evaluation number should be equal to total number of Form II's filled out on client.

.43 Form I and Form II dates disagree--Form II, Evaluation 01 must be dated within five days of Form I. Date on Form II cannot be before the date of Form I.
Refer Inst. II #5

.44 Invalid classification for 1st evaluation--For 1st evaluation only valid choices are: 1, 4, 5, and 7.
Refer Inst. II #10

.45 Classification inconsistent with living arrangements--If Item #10 is 7 then Item #11A must be 64. If Item #10 is 0 then Item #11A must be N.A.
Refer Inst. II #10 and 11A

.46 Living arrangements inconsistent with home--If #11A is 64 or greater then 11B must be 8 or greater.
Refer Inst. II #11B

.47 Q-13-16 should be non-applicable--If #11B is 8 or 9, 13-16 must be non-applicable.
Refer Inst. II #11B-16

.48 Widowed client coded as living with spouse--By definition one who is widowed (5) cannot be living with spouse (2).
Refer Inst. II #11B and 12

.49 Unmarried client coded as living with spouse--If client is entered as unmarried (0) on Item 12, 11B cannot be entered as husband or wife (12). Note: definition of common law.
Refer Inst. II #11B and 12

.50 Income of unmarried or widowed client from spouse--If Item 12 is entered (0) "Never married," then spouse cannot be entered in Item #17.
Refer Inst. II #12 and 17

.51 Q-14-16 greater than Q 13--Each number entered in Items 14, 15, and 16 must be equal to or less than number entered in Item 13.
Refer Inst. II #13, 14, 15, 16

.52 More than one or no major source of income--By definition, for this project, only one item in Question 17 can be described as major source of income, choice (1).
Refer Inst. II #17

.53 Client with legal job worked less than 5 days--If client has legal job as major source of income (Item 17), it is highly improbable that he would work less than 5 days in past 28.
Refer Inst. II #17 and 19B

.54 Client has worked but legal job not coded--If 19B is 1 or greater, legal job must be checked 1 or 2.
Refer Inst. II #17 and 19B

.55 Legal job coded but client not working--If 17 legal job is 1 or 2, then 19B must be greater than 0.
Refer Inst. II #17 and 19B

.56 Current job higher than level of training--The client may be working at a job level (18A, Form II, Evaluation 01) lower than his training or experience (21B, Form I), but by definition he cannot be working at a job level higher than his experience. Therefore Item 18A, Form II, Evaluation 01 must be equal to or less than Item 21B, Form I.
Refer Inst. II #18A

.57 Current job and days worked inconsistent--This message indicates inconsistencies between 18A, 19A and 19C.

Refer Inst. II #18A, 19A and C

.58 Relations with fellow employees coded incorrectly--Error if 19A is coded 1 and 19C is 0 (man cannot be employed and unemployed at the same time). If 19A is 2 to 6, then 19C must be 0.

Refer Inst. II #19A and C

.59 Earnings too high for days worked--It is assumed, for this project, that the client is unlikely to be earning over $20 per day. If client does earn more than $20 per day, please write "Confirming 19D money earned in last four weeks". Note: this refers to legal job earnings only.

Refer Inst. II #19D

.60 Total income less than earned income--Total income 19E must be equal to or greater than 19D, money earned from legal job.

Refer Inst. II #19D and E

.61 Number of times arrested too great--It is assumed that client has not been arrested more than 28 times in the last four weeks. If he has, please specify and write "Confirming number of times arrested past four weeks _____".

Refer Inst. II #20

.62 Number of days in jail too great--The client could not have been jail more than 28 days in the last four weeks.

Refer Inst. II #21

.63 Number of days in hospital too great--The client could not have been in the hospital more than 28 days in the last four weeks.

Refer Inst. II #22

.64 Sum of days in jail and hospital too great--The sum of Items 21 and 22 cannot be greater than 28.

Refer Inst. II #21 and 22

.65 Sum of days in jail, hospital and program too great--The sum of Items 21, 22 and 32 (hospitalization, full residential care and full day care) cannot exceed 28.

Refer Inst. II #21, 22, and 32

.66 Present drug use on Form I disgrees with Form II, Evaluation 01--Present drug use on Form I should agree with present drug use on Form II, Evaluation 01, since both are filled out on same day or within 5 days. Present drug use means average drug use for past four weeks.

Refer Inst. II #23, Inst. I #28C

.67 Frequency of drug use missing--Check Item 23 and 24, Form II to be sure it is not blank. Choices are 0 through 3. If Item 24 is greater than 0, Item 23 must show frequency.

Refer Inst. II #23 and 24

.68 Problem areas 22, 23, 25, and 26 should be non-applicable--If client is incarcerated or hospitalized, Boxes 22, 23, 25, and 26 for Item 25 should be marked 4 (not applicable at this phase of program). Note: they should <u>not</u> be marked (0) "No problem".

Refer Inst. II #25

.69 Number positive urine test greater than total test--Item 30B must be equal to or less than 30A.

Refer Inst. II #30A and B

.70 Missing header card--This error message concerns procedures at <u>our</u> office--Please disregard.

.71 Non-matching letter code--This error message will appear when there is an inconsistency between 5B, Form I and 6B, Form II.

Refer Inst. I #5B and Inst. II #6B

.72 No Form I on file for Form II--This message indicates that our office cannot locate Form I for a specific Form II. Please locate or fill out and forward duplicate of this Form I.

.73 Duplicate case number--In no instance can two Form I's with the same case number exist.

.74 Master file full--Same as error message .70.

07/1	MSG	FORM	CASE	PR	INTV	QUES	DATA
31	DRUG USAGE & EARLIEST AGE INCONSISTENT	1	0001	1	001	28	0000
31	DRUG USAGE & EARLIEST AGE INCONSISTENT	1	0001	1	001	28	0000
40	INVALID MEDICAL INFORMATION CODE	1	0001	1	001	36	0000
43	FORM 1 AND FORM 2 DATES DISAGREE	2	0001	1	001	05	0003
57	CLIENT INCORRECTLY CODED AS HAVING JOB	2	0001	1	001	18	0004
59	EARNINGS TOO HIGH FOR DAYS WORKED	2	0001	1	001	19	0175
66	PRST. DRUG USE ON FM. 1 DIS. WITH FM. 2	2	0001	1	001	23	0000
31	DRUG USAGE & EARLIEST AGE INCONSISTENT	1	0002	1	001	28	0000
31	DRUG USAGE & EARLIEST AGE INCONSISTENT	1	0002	1	001	28	0000
31	DRUG USAGE & EARLIEST AGE INCONSISTENT	1	0002	1	001	28	0000
40	INVALID MEDICAL INFORMATION CODE	1	0002	1	001	36	0000
43	FORM 1 AND FORM 2 DATES DISAGREE	2	0002	1	001	05	0003
52	MORE THAN 1 OR NO MAJOR INCOME SOURCE	2	0002	1	001	17	0000
54	CLIENT HAS WORKED BUT LEGAL JOB NOT CDED	2	0002	1	001	17	0000
58	RELATIONS WITH CO-WORKERS INCORRECT	2	0002	1	001	19	0001
66	PRST. DRUG USE ON FM. 1 DIS. WITH FM. 2	2	0002	1	001	23	0000
31	DRUG USAGE & EARLIEST AGE INCONSISTENT	1	0003	1	001	28	0000
31	DRUG USAGE & EARLIEST AGE INCONSISTENT	1	0003	1	001	28	0000
30	AGE DRUGS FIRST USED LESS THAN 8 YEARS	1	0003	1	001	28	0000
31	DRUG USAGE & EARLIEST AGE INCONSISTENT	1	0003	1	001	28	0000
31	DRUG USAGE & EARLIEST AGE INCONSISTENT	1	0003	1	001	28	0000
31	DRUG USAGE & EARLIEST AGE INCONSISTENT	1	0003	1	001	28	0000
04	MISSING CARD 2	2	0003	1	001	00	0001
42	INVALID EVALUATION NUMBER	2	0003	1	001	04	0001
56	LIVING ARR. INCONSISTENT WITH HOME	2	0003	1	001	11	0008
52	MORE THAN 1 OR NO MAJOR INCOME SOURCE	2	0003	1	001	17	0000
54	CLIENT HAS WORKED BUT LEGAL JOB NOT CDED	2	0003	1	001	17	0000

SAMPLE

CHAPTER IV

APPENDIX B

MONTHLY MANAGEMENT INFORMATION SUMMARY REPORT
FOR SINGLE PROGRAM

AND

MONTHLY MANAGEMENT INFORMATION SUMMARY REPORT
FOR MULTIPLE PROGRAMS
(REPORTS SENT TO OEO BY FPR)

O.E.O. OFFICE OF HEALTH SERVICES - PROGRAMS TO COMBAT NARCOTICS ADDICTION
BETWEEN 04/01/69 AND 04/30/69
PARTICIPANT CHARACTERISTICS IN NARCOTICS REHABILITATION PROJECTS

PROJECT IDENTIFICATION NUMBERS	1	TOTALS
1. TOTAL PARTICIPANTS	9	372
A. NUMBER OF ADMISSIONS	8	161
B. NUMBER OF DROP OUTS	0	69
2. AGE RANGE		
A. 00-5	0	0
B. 6-15	0	2
C. 16-21	2	150
D. 22-44	7	289
E. 45-64	0	18
F. 65 AND OVER	0	5
UNKNOWN	0	0
3. FAMILY INCOME		
A. NO. ABOVE POVERTY LINE	5	73
B. NO. BELOW POVERTY LINE		
1 $1-499 BELOW	0	11
2 $500-1,499 BELOW	1	10
3 $15,500 OR MORE BELOW	2	20
UNKNOWN	1	350
NUMBER FAMILIES		
A. WELFARE PAYMENTS	2	159
5. SEX		
A. MALE	6	354
B. FEMALE	3	110
UNKNOWN	0	0
6. RACIAL OR ETHNIC GROUP		
A. CAUCASIAN	9	237
1 MEXICAN/AMERICAN	8	66
2 PUERTO RICAN	0	35
3 OTHER CAUCASIAN	1	136
B. NEGRO	0	203
C. AMERICAN INDIAN	0	2
D. ORIENTAL	0	1
E. OTHER	0	17
UNKNOWN	0	4
7. TOTAL HEADS OF HOUSEHOLD	1	37

SAMPLE

DATA ANALYSIS PROVIDED BY FRIENDS OF PSYCHIATRIC RESEARCH, INC.
IN CASE OF QUESTION CALL (301) 744-5937

O.E.O. OFFICE OF HEALTH SERVICES - PROGRAMS TO COMBAT NARCOTICS ADDICTION

PARTICIPANT CHARACTERISTICS IN NARCOTICS REHABILITATION PROJECTS

PROJECT IDENTIFICATION NUMBERS	8	7	6	5	4	3	2	1	TOTALS
1. TOTAL PARTICIPANTS	3	2	1	5	3	2	2	1	19
2. AGE RANGE									
A. 00-5	1	2	0	0	2	2	0	0	7
B. 6-15	1	0	0	0	0	0	0	0	1
C. 16-21	0	0	0	1	0	0	1	0	2
D. 22-44	1	0	1	1	0	0	0	1	4
E. 45-64	0	0	0	3	0	0	0	0	3
F. 65 AND OVER	0	0	0	0	1	0	1	0	2
3. FAMILY INCOME									
A. NO. ABOVE POVERTY LINE	0	0	1	3	3	2	1	1	11
B. NO BELOW POVERTY LINE									
(1) $1-499 BELOW	0	0	0	0	0	0	0	0	0
(2) $500-1,499BELOW	1	2	0	1	0	0	0	0	4
(3) $1,500 OR MORE BELOW	2	0	0	1	0	0	1	0	4
4. NUMBER FAMILIES WELFARE PAYMENTS	2	2	1	4	2	2	1	1	15
5. SEX									
A. MALE	2	2	0	3	0	0	2	0	9
B. FEMALE	1	0	1	2	3	2	0	1	10
6. RACIAL OR ETHNIC GROUPS									
A. CAUCASIAN									
(1) MEXICAN/AMERICAN	0	0	0	2	0	0	0	0	2
(2) PUERTO RICAN	0	0	0	0	2	2	0	0	4
(3) OTHER CAUCASIAN	2	2	1	1	0	0	0	1	7
B. NEGRO	1	0	0	1	0	0	1	0	3
C. AMERICAN INDIAN	0	0	0	0	0	0	1	0	1
D. ORIENTAL	0	0	0	0	1	0	0	0	1
E. OTHER	0	0	0	1	0	0	0	0	1
7. TOTAL HEADS OF HOUSEHOLD	1	0	0	2	1	0	2	0	6

DATA ANALYSIS PROVIDED BY FRIENDS OF PSYCHIATRIC RESEARCH, INC.
IN CASE OF QUESTION CALL (301) 744-5937

SAMPLE

CHAPTER IV

APPENDIX C

MONTHLY CLIENT INFORMATION SUMMARY REPORT
FOR SINGLE PROGRAM

AND

MONTHLY CLIENT INFORMATION SUMMARY REPORT
FOR MULTIPLE PROGRAMS
(REPORTS SENT TO OEO BY FPR)

E.O. OFFICE OF HEALTH SERVICES - PROGRAMS TO COMBAT NARCOTICS ADDICTION
BETWEEN 04/01/69 AND 04/30/69
MONTHLY REPORT ON FREQUENCIES OF SELECTED VARIBLES
CLIENT INFORMATION SUMMARY

PROJECT IDENTIFICATION NUMBERS	5	TOTALS
1. TOTAL PARTICIPANTS	198	376
LOST TO PROGRAM	1	88
NUMBER OF ADMISSIONS	88	161
2. TYPE OF ADMISSION		
A. VOLUNTARY	133	323
B. VOLUNTARY,URGED	34	44
C. VOLUNTARY,LEGAL,URGED	8	15
D. CIVIL COMMITMENT	0	5
E. CRIMINAL COMMITMENT	0	5
F. PROBATION	12	45
G. PAROLE	4	13
UNKNOWN	8	14
3. AGE RANGE		
A. 15 AND UNDER	1	2
B. 16-21	79	153
C. 22-34	96	230
D. 35-44	15	62
E. 45-64	4	12
F. 65 AND OVER	3	3
UNKNOWN	1	2
4. SEX		
A. MALE	146	354
B. FEMALE	53	110
UNKNOWN	0	0
5. RACIAL AND ETHNIC GROUP		
A. CAUCASIAN	109	237
1. MEXICAN/AMERICAN	1	66
2. PUERTO RICAN	30	35
3. OTHER	78	136
B. NEGRO	80	203
C. ORIENTAL	1	1
D. AMERICAN INDIAN	2	2
E. OTHER	6	17
UNKNOWN	1	4

SAMPLE

O.E.O. OFFICE OF HEALTH SERVICES - PROGRAMS TO COMBAT NARCOTICS ADDICTION
BETWEEN 05/01/68 AND 01/32/69
MONTHLY REPORT ON FREQUENCIES OF SELECTED VARIBLES
CLIENT INFORMATION SUMMARY

PROJECT IDENTIFICATION NUMBERS	1	2	3	4	5	7	8	TOTALS
1. TOTAL PARTICIPANTS	147	174	78	312	638	67	68	1484
LOST TO PROGRAM	0	53	0	13	142	5	7	220
NUMBER OF ADMISSIONS	147	125	73	300	539	64	68	1316
2. TYPE OF ADMISSION								
A. VOLUNTARY	141	132	70	234	567	60	33	1237
B. VOLUNTARY-URGED	6	35	5	9	111	3	17	186
C. VOLUNTARY-LEGAL-URGED	0	17	1	15	35	2	5	75
D. CIVIL COMMITMENT	0	1	0	0	0	6	0	7
E. CRIMINAL COMMITMENT	0	6	0	4	0	0	0	10
F. PROBATION	0	3	0	47	43	0	10	103
G. PAROLE	0	28	0	4	15	1	9	57
UNKNOWN	0	5	2	12	9	0	1	29
3. AGE RANGE								
A. 15 AND UNDER	1	2	0	0	28	0	1	32
B. 16-21	27	37	3	74	325	8	29	503
C. 22-34	60	104	46	177	345	54	35	821
D. 35-44	54	59	23	59	74	8	6	283
E. 45-64	5	13	5	10	6	1	0	40
F. 65 AND OVER	0	1	1	2	1	1	1	7
UNKNOWN	0	11	0	3	1	0	3	18
4. SEX								
A. MALE	124	164	61	264	678	58	51	1400
B. FEMALE	23	63	17	60	102	14	23	302
UNKNOWN	0	0	0	1	0	0	1	2
5. RACIAL AND ETHNIC GROUP								
A. CAUCASIAN	134	21	29	86	462	65	62	859
1. MEXICAN/AMERICAN	120	0	3	0	4	55	1	183
2. PUERTO RICAN	1	0	9	5	196	0	0	211
3. OTHER	13	21	17	81	262	10	61	465
B. NEGRO	8	201	44	207	284	5	8	757
C. ORIENTAL	0	0	0	9	4	0	1	14
D. AMERICAN INDIAN	1	0	2	3	3	0	4	13
E. OTHER	4	2	3	15	21	1	0	46
UNKNOWN	0	3	0	5	6	1	0	15

SAMPLE

CLIENT INFORMATION SUMMARY

PROJECT IDENTIFICATION NUMBERS	1	2	3	4	5	7	8	TOTALS
6. EDUCATION								
A. GRADE SCHOOL OR LESS	22	32	16	51	97	37	3	258
B. HIGH SCHOOL OR LESS	123	179	56	253	642	31	58	1342
C. SOME COLLEGE	2	16	5	19	39	2	11	94
D. SOME POST GRADUATE	0	0	0	0	1	0	0	1
UNKNOWN	0	0	1	2	0	2	3	8
7. ARMED FORCES								
A. NEVER SERVED	117	185	50	247	668	55	54	1376
B. HONORABLE DISCHARGE	24	32	25	69	83	11	14	258
C. DISHONORABLE DISCHARGE	6	5	2	9	27	6	3	58
D. NOT DISCHARGED	0	0	0	0	1	0	0	1
UNKNOWN	0	5	1	0	1	0	4	11
8. USUAL JOB WHEN WORKING								
A. EXECUTIVE	0	1	0	0	2	0	0	3
B. MANAGER	1	3	2	2	5	0	1	14
C. ADMINISTRATOR	3	11	1	1	37	0	4	57
D. CLERK/SALESMAN	20	34	11	43	205	5	12	330
E. SKILLED WORKER	36	41	20	80	117	11	18	323
F. SEMI-SKILLED WORKER	46	29	23	102	154	32	10	396
G. UNSKILLED WORKER	38	78	17	86	188	19	18	444
H. ILLEGAL ACTIVITIES	0	6	1	0	6	0	1	14
I. HOUSEWIFE	1	0	0	3	1	2	2	9
J. STUDENT	2	11	1	6	59	3	6	88
UNKNOWN	0	13	2	2	6	0	3	26
9. HIGHEST LEVEL OF TRAINING								
A. EXECUTIVE	0	1	0	1	1	0	0	3
B. MANAGER	2	4	5	4	14	0	3	32
C. ADMINISTRATOR	5	10	0	5	53	0	4	77
D. CLERK/SALESMAN	21	44	10	49	214	4	16	358
E. SKILLED WORKER	52	69	25	99	149	20	22	436
F. SEMI-SKILLED WORKER	45	20	22	106	152	32	7	384
G. UNSKILLED WORKER	20	51	14	50	126	12	10	283
H. ILLEGAL ACTIVITIES	0	6	0	0	5	0	1	12
I. HOUSEWIFE	0	0	0	4	1	2	3	10
J. STUDENT	2	14	1	6	58	1	6	88
UNKNOWN	0	8	1	1	7	1	3	21

SAMPLE

CLIENT INFORMATION SUMMARY

PROJECT IDENTIFICATION NUMBERS	1	2	3	4	5	7	8	TOTALS
10. AGE AT FIRST ARREST								
A. 15 AND UNDER	78	42	16	89	177	15	20	437
B. 16-21	52	101	39	144	370	41	35	782
C. 22-34	9	49	15	55	80	11	5	224
D. 35-44	2	1	2	6	1	0	1	13
E. 45 AND OVER	0	2	0	0	1	0	0	3
UNKNOWN	0	3	1	0	6	1	3	14
11. TIME IN JAIL								
A. YES	128	157	49	250	353	38	30	1005
B. NO	13	34	22	44	260	30	31	434
UNKNOWN	0	7	2	0	8	0	3	20
12. ADMISSION TO FT. WORTH/LEX.								
A. NONE	124	142	46	260	695	58	70	1395
B. 1-9	23	77	31	64	71	14	3	283
UNKNOWN	0	8	1	1	14	0	2	26
13. DRUG USE								
A. FIRST USE OF MARIJUANA								
1. 15 AND UNDER	79	27	28	89	346	16	15	590
2. 16-19	43	73	26	131	280	25	31	609
3. 20 AND OVER	7	32	19	46	65	11	14	194
UNKNOWN	0	4	0	0	0	0	2	6
B. FIRST USE OF NARCOTICS								
1. 15 AND UNDER	14	15	7	38	179	6	3	262
2. 16-19	69	100	27	161	385	27	23	792
3. 20 AND OVER	41	103	41	124	172	37	28	546
UNKNOWN	0	3	0	0	0	1	2	6
C. USE ON ENTERING PROGRAM								
1. AMPHETAMINES								
A. NOT AT ALL	137	211	71	303	689	66	44	1521
B. OCCASIONALLY	8	7	2	14	58	6	16	111
C. OFTEN	1	2	3	3	15	0	1	25
D. DAILY	1	3	1	5	18	0	12	40
UNKNOWN	0	4	1	0	0	0	2	7
2. BARBITURATES								
A. NOT AT ALL	134	221	66	302	648	66	55	1492
B. OCCASIONALLY	7	1	5	16	81	6	9	125
C. OFTEN	4	1	2	2	16	0	3	28
D. DAILY	2	0	3	5	35	0	7	52
UNKNOWN	0	4	2	0	0	0	1	7

CLIENT INFORMATION SUMMARY

PROJECT IDENTIFICATION NUMBERS	1	2	3	4	5	7	8	TOTALS
13. DRUG USE								
C. USE ON ENTERING PROGRAM								
3. MARIJUANA								
A. NOT AT ALL	131	185	49	220	498	62	36	1181
B. OCCASIONALLY	6	28	18	66	164	6	21	309
C. OFTEN	2	5	3	21	59	2	7	99
D. DAILY	8	5	7	18	59	2	9	108
UNKNOWN	0	4	1	0	0	0	2	7
4. INHALANTS								
A. NOT AT ALL	147	223	76	315	750	71	71	1653
B. OCCASIONALLY	0	0	0	8	18	1	2	29
C. OFTEN	0	0	1	2	6	0	0	9
D. DAILY	0	0	0	0	6	0	0	6
UNKNOWN	0	4	1	0	0	0	2	7
5. NARCOTICS								
A. NOT AT ALL	135	85	6	38	313	3	33	613
B. OCCASIONALLY	0	21	2	13	88	0	5	129
C. OFTEN	3	29	3	9	58	1	5	108
D. DAILY	9	89	67	265	321	68	31	850
UNKNOWN	0	3	0	0	0	0	1	4
6. PSYCHEDELICS								
A. NOT AT ALL	147	220	77	308	735	71	56	1614
B. OCCASIONALLY	0	3	1	12	26	1	12	55
C. OFTEN	0	0	0	3	10	0	2	15
D. DAILY	0	0	0	2	9	0	3	14
UNKNOWN	0	4	0	0	0	0	2	6
7. OTHER								
A. NOT AT ALL	147	218	75	321	770	70	61	1662
B. OCCASIONALLY	0	1	1	0	2	1	6	11
C. OFTEN	0	1	2	1	1	1	0	6
D. DAILY	0	3	0	0	6	0	4	13
UNKNOWN	0	4	0	3	1	0	4	12
14. RAISED IN INSTITUTION								
A. YES	5	4	2	6	15	2	6	40
B. NO	142	214	74	317	759	70	66	1642
UNKNOWN	0	9	2	2	6	0	3	22

CLIENT INFORMATION SUMMARY

PROJECT IDENTIFICATION NUMBERS	1	2	3	4	5	7	8	TOTALS
15. NUMBER OF EVALUATIONS								
A. ONE	147	227	78	325	780	72	75	1704
B. TWO	0	0	0	0	0	0	0	0
C. THREE	0	0	0	0	0	0	0	0
D. FOUR	0	0	0	0	0	0	0	0
E. FIVE	0	0	0	0	0	0	0	0
F. SIX	0	0	0	0	0	0	0	0
G. SEVEN	0	0	0	0	0	0	0	0
H. EIGHT	0	0	0	0	0	0	0	0
I. NINE	0	0	0	0	0	0	0	0
J. TEN	0	0	0	0	0	0	0	0
K. ELEVEN	0	0	0	0	0	0	0	0
L. TWELVE	0	0	0	0	0	0	0	0
M. THIRTEEN	0	0	0	0	0	0	0	0
N. FOURTEEN	0	0	0	0	0	0	0	0
O. FIFTEEN, AND OVER	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0
16. CURRENT CLASSIFICATION								
A. ADMISSION	147	125	73	300	539	64	68	1316
B. RE-ADMISSION	0	6	0	2	17	3	0	28
C. PARTICIPATING IN PROGRAM	0	37	4	7	79	0	0	127
D. REFUSED ADMISSION	0	11	0	2	4	5	4	26
E. DEFERRED ADMISSION	0	0	0	0	0	0	3	3
F. COMPLETED PROGRAM	0	0	0	0	0	0	0	0
G. INSTITUTIONALIZED	0	5	0	2	1	0	0	8
H. DROP OUT	0	33	0	5	138	0	0	176
I. LOST TO FOLLOW UP	0	9	0	6	0	0	0	15
J. DECEASED	0	0	0	0	0	0	0	0
UNKNOWN	0	1	1	1	2	0	0	5
17. CURRENT MARITAL STATUS								
A. MARRIED	30	60	21	63	100	36	17	327
B. NOT MARRIED	117	114	57	246	534	31	50	1149
UNKNOWN	0	0	0	3	4	0	1	8
18. DAYS IN JAIL IN LAST FOUR WEEKS								
A. NONE	77	135	70	255	570	61	47	1215
B. 1-28	70	25	7	52	58	5	18	235
UNKNOWN	0	14	1	5	10	1	3	34

CLIENT INFORMATION SUMMARY

PROJECT IDENTIFICATION NUMBERS	1	2	3	4	5	7	8	TOTALS
19. PEOPLE USING DRUGS AT PRESENT								
A. AMPHETAMINES	9	8	7	26	89	4	28	171
B. BARBITURATES	12	1	10	21	147	5	18	214
C. MARIJUANA	15	15	24	90	252	4	32	432
D. INHALANTS	0	0	0	9	26	1	1	37
E. NARCOTICS	13	89	72	274	394	64	39	945
F. PSYCHEDELICS	0	0	1	15	53	1	17	87
G. OTHER	0	0	2	1	10	2	7	22
20. URINE TESTS								
A. TOTAL	0	0	0	0	0	0	0	0
B. POSITIVE	0	0	0	0	0	0	0	0
21. PEOPLE USING SERVICES								
A. HOSPITALIZATION	0	0	0	0	0	0	0	0
B. GROUP MEETINGS	0	0	0	0	0	0	0	0
C. FULL RESIDENTIAL CARE	0	0	0	0	0	0	0	0
D. INDIVIDUAL MEETINGS	0	0	0	0	0	0	0	0
E. FULL DAY CARE	0	0	0	0	0	0	0	0
F. MEDICAL TREATMENT	0	0	0	0	0	0	0	0
G. DRUG MAINTENANCE	0	0	0	0	0	0	0	0
H. FAMILY CONTACTS	0	0	0	0	0	0	0	0
I. SHELTERED WORKSHOP	0	0	0	0	0	0	0	0
J. OTHER	0	0	0	0	0	0	0	0
22. USE OF SERVICES								
A. NOT UTILIZED	0	0	0	0	0	0	0	0
B. FULL	0	0	0	0	0	0	0	0
C. PARTIAL, SATISFACTORY	0	0	0	0	0	0	0	0
D. PARTIAL, UNSATISFACTORY	0	0	0	0	0	0	0	0
UNKNOWN	0	0	0	0	0	0	0	0

NOTE - CLIENTS WITH CLASSIFICATION NUMBER 0 4 5 8 OR 9 ARE NOT COUNTED AS LOST TO PROGRAM AND ARE NOT CONSIDERED PARTICIPANTS. THEY ARE THEREFORE NOT INCLUDED AGTER FREQUENCY COUNT 16.

DATA ANALYSIS PROVIDED BY FRIENDS OF PSYCHIATRIC RESEARCH INC.
IN CASE OF QUESTION CALL 301 744-5937

CHAPTER IV

APPENDIX D

OVERDUE FORMS REPORT
(REPORT SENT TO TREATMENT PROGRAMS BY FPR)

PROJECT NUMBER 5

ACCORDING TO OUR RECORDS AN EVALUATION FORM IS OVERDUE FOR THE FOLLOWING PARTICIPATING CLIENTS -

CASE NUMBER	EVALUATION NUMBER	DATE OF LAST EVALUATION	NAME	SOCIAL SECURITY NUMBER	CURRENT CLASSIFICATION
1287	11	02 14 69	RTDU	156306778	3
1295	04	01 27 69	ORPE	053369695	3
1297	08	03 04 69	ANRA	075386840	3
1299	06	12 31 68	PHTH	121401715	3
1310	09	01 11 69	NYTO	124362127	3
1317	11	01 01 69	SEBC	120427035	3
1330	03	09 10 68	RDCR	066366496	3
1333	01	05 07 68	ELDO	050360025	1
1337	10	01 13 69	AMRE	-	3
1340	11	03 03 69	NAHO	-	3
1341	01	05 13 68	HNGE	120380462	1
1344	01	05 21 68	AMPO	089423184	1
1346	09	03 04 69	ELTH	106261170	3
1350	05	15 68 OR	LUIO	811103235	2
1353	01	05 13 68	ESMI	-	1
1364	01	05 15 68	EYHI	061408628	1
1374	01	05 14 69	NKVE	076401234	1
1375	03	07 22 68	PHOS	051364861	2
1376	01	05 15 68	NFNU	-	1

SAMPLE

V. COMPREHENSIVE DATA ANALYSES: LIMITATIONS AND STRATEGIES

A. Introduction

The meaningful and comprehensive analysis of the vast amounts of data collected by the seven funded programs over a two-year period was a formidable undertaking. At the outset, practical and efficient procedures for checking, editing, keypunching, and storing the incoming data for later electronic processing had to be developed. To assist in this task, a special computer program was written. In addition, it was necessary to supply OEO as well as the individual agencies with monthly information relative to client treatment. These activities, together with the necessity for maintaining constant avenues of communication with all of the parties concerned, accounted for the bulk of project staff time during the actual data-collection phase.

The routine day-to-day activities involved in the regular monthly processing have already been described in Chapter IV. In the present chapter, an attempt is made to acquaint the reader with some of the conceptual and statistical problems encountered in trying to achieve a comprehensive analysis of the data collected. Following this is a discussion of the actual statistical and analytical methods employed to extract what is believed to be the maximum amount of meaningful information from the data within a reasonable period of time.

B. Some Problems of Analysis and Interpretation

1. Reliability and Validity of Data. Any discussion of analytical and interpretative problems must begin with a consideration of the basic issues of data reliability and validity. In the present context, data reliabilty refers to the consistency (or lack of it) with which assessments of client status can be made by various counselors or interviewers. For example, if the same client on the same occasion were to give different responses to two different interviewers asking the same question, the reliability of response to that question would obviously be less than perfect. Similarly, differences in interviewer interpretations of client behavior would contribute to unreliability of those items requiring a judgment or an assessment. Data reliability is important insofar as it affects data validity, the latter being defined in the present context as the absolute accuracy, correctness, or veridicality of the information obtained. It should be clear that reliability is a necessary but not a sufficient condition for validity. For example, two conflicting answers to the same question could not both be right; however, they could both be wrong.

With respect to any given item of information, formal indices of reliability and validity computed on many different client-interviewer combinations would be neither zero nor perfect but certainly, some intermediate value would be obtained. Thus it can be assumed from the beginning that any given body of data will contain a greater or lesser amount of error or "noise."

In view of the fact that it was not feasible during the project data collection phase to provide for any formal assessment of data

reliability or validity, the foregoing discussion might tend to be dismissed as academic. This would be unfortunate, for the effects of these issues exist regardless of whether or not they are formally considered. Any future investigations would do well to incorporate assessments of data reliability and validity in the original study design. For the present, it can only be assumed that the data collected were, on the whole, sufficiently accurate to support the tentative interpretations made.

2. Representativeness of the Sample. An issue closely related to the foregoing is that of sample, i.e., client [illegible] data, representativeness. It would doubtless be desirable to be able to [illegible]eralize findings, in the sense that such findings might be expected [illegible]hold true for the larger population of addicts of whom those tr[illegible] were, presumedly, a representative sample. In the absence of oth[illegible]formation, representativeness is usually achieved through a formal [illegible]ss of random selection. In the present context, such was not the case[illegible]icts were referred from various sources, and the programs diffe[illegible] their methods and sources of referral. In actual practice, tar[illegible]pulations appear to have been variously defined. An additional c[illegible]ation was introduced by the fact that certain programs did [illegible]mit data on all clients seen because of treatment as well as [illegible]strative considerations. Thus, for at least some of the programs, it [illegible]ficult to know whether clients on whom data are available [illegible]esentative of all clients seen and/or treated, and it is equa[illegible]ficult to know whether clients seen and/or treated are representat[illegible]ll potential clients in the hypothetical target populations.

Once again, the above discussion may [illegible]demic in view of the fact that it was not feasible to control fo[illegible]tion of clients on whom data are available. As before, howev[illegible]rpose of this discussion is to alert the reader to logic[illegible]tions imposed on any interpretations made and to caution hi[illegible] reaching any possibly unwarranted conclusions.

3. Client "Drop-Outs" and Missing Dat[illegible]. Another problem confronting the data analyst in any evaluation of trea[illegible]ency is that of missing data, frequently occasioned by cl[illegible]-out." All other problems surrounding treatment evaluations[illegible]ations, at least in theory. Unfortunately, a satisfactory sol[illegible] the problem of missing data occasioned by premature termi[illegible] treatment has yet to be found (c.f. Lasky, 1962).

For the majority of the programs, pr[illegible]nd premature termination of treatment reached epidemic [illegible]. This statement is not meant to impugn the diligent effor[illegible]rious program personnel; it is, rather, a simple state[illegible] that reflects the realities of dealing with an addict popul[illegible]rtunately, facing the reality of the situation accomplishes [illegible]he way of solving the problem involved.

The issue can perhaps best be appreciated with reference to a few tabulations of relevant information. Data from the Chicago program are presented by way of illustration; comparable data for all programs are contained in the Statistical Appendices accompanying this report.

It will be recalled from Chapter III that a Form I (Descriptive Information) and a Form II (Evaluative Information) were to be completed on each client at the time of his admission to a program. All clients were to be re-evaluated and additional Form II's filled-out at four-week intervals until treatment was completed or the client lost to follow-up. Since Form I was to be completed only once (on admission), the number of unduplicated Form I's received from a program was taken to represent the number of clients admitted to treatment.

Table V-1 shows the number of Form II's usable (i.e., available and at least partially filled-out) for analysis at each monthly evaluation point, including admission (Point 1). It will be seen that the number of forms available drops sharply and immediately, and that only a small fraction of the total 348 clients were evaluated beyond the fifth month. It should be noted that this table provides no information concerning the number of consecutive, uninterrupted, monthly evaluations. For this, we must turn to Table V-2.

TABLE V-1

Program - Chicago

Number of Form II's Usable for Analysis
at Each Monthly Evaluation Point

Evaluation Point	1	has	348 Usable Forms
Evaluation Point	2	has	314 Usable Forms
Evaluation Point	3	has	198 Usable Forms
Evaluation Point	4	has	124 Usable Forms
Evaluation Point	5	has	82 Usable Forms
Evaluation Point	6	has	51 Usable Forms
Evaluation Point	7	has	34 Usable Forms
Evaluation Point	8	has	31 Usable Forms
Evaluation Point	9	has	28 Usable Forms
Evaluation Point	10	has	25 Usable Forms
Evaluation Point	11	has	23 Usable Forms
Evaluation Point	12	has	22 Usable Forms
Evaluation Point	13	has	16 Usable Forms
Evaluation Point	14	has	8 Usable Forms
Evaluation Point	15	has	11 Usable Forms
Evaluation Point	16	has	6 Usable Forms
Evaluation Point	17	has	4 Usable Forms
Evaluation Point	18	has	5 Usable Forms
Evaluation Point	19	has	2 Usable Forms
Evaluation Point	20	has	2 Usable Forms
Evaluation Point	21	has	3 Usable Forms

TABLE V-2

Program - Chicago

Cohort Group Membership as Determined by the Number of Uninterrupted Evaluations (Form II's) Received for a Client that are Usable for Analysis.

			PERCENT	CUM. PERCENT
Cohort Group	0 has	6 Members	1.7	1.7
Cohort Group	1 has	143 Members	41.0	42.8
Cohort Group	2 has	80 Members	22.9	65.8
Cohort Group	3 has	48 Members	13.7	79.5
Cohort Group	4 has	34 Members	9.7	89.3
Cohort Group	5 has	19 Members	5.4	94.8
Cohort Group	6 has	10 Members	2.8	97.7
Cohort Group	7 has	2 Members	0.5	98.2
Cohort Group	8 has	2 Members	0.5	98.8
Cohort Group	9 has	2 Members	0.5	99.4
Cohort Group	10 has	0 Members	0.0	99.4
Cohort Group	11 has	1 Members	0.2	99.7
Cohort Group	12 has	0 Members	0.0	99.7
Cohort Group	13 has	1 Members	0.2	100.0

TOTAL CLIENTS - 348

Table V-2 defines cohort group membership in terms of the number of uninterrupted monthly evaluations received for a client from the time of his admission into a program. It will be noted that the largest single category (41.0%) received only one Form II (on admission) and failed to receive the very next monthly evaluation as scheduled. This was true in spite of the fact that for the purposes of analysis, a 30-day "grace" period beyond each scheduled evaluation date was allowed for the inclusion of data. (This grace period was introduced in order to utilize the maximum amount of data possible without completely invalidating the monthly evaluation concept and its attendant statistical analysis.) It will also be noted that almost 90% of the sample had fewer than five consecutive monthly evaluations, and almost 80% had fewer than four. The import of these figures is that less than 5% of the sample could be followed on a regular monthly basis for as little as six months. It would be hazardous indeed to generalize findings based on this small fraction of cases back to the original group, much less to an entire target population.

A third view of the missing data problem is provided by Table V-3. It will be seen that the majority (58.9%) of clients had fewer than four (three, two, one, or zero) usable evaluations, regardless of when these evaluations were made. Conversely, barely 2% of the 348 clients had more than five evaluations, disregarding consideration of continuity.

TABLE V-3

Program - Chicago

Number of Usable Evaluations (Form II's) by Clients
(Without Regard to Continuity)

		PERCENT	CUM. PERCENT
0 Clients have	0 Usable Evaluations	0.0	0.0
18 Clients have	1 Usable Evaluations	5.1	5.1
120 Clients have	2 Usable Evaluations	34.4	39.6
67 Clients have	3 Usable Evaluations	19.2	58.9
44 Clients have	4 Usable Evaluations	12.6	71.5
32 Clients have	5 Usable Evaluations	9.1	80.7
21 Clients have	6 Usable Evaluations	6.0	86.7
17 Clients have	7 Usable Evaluations	4.8	91.6
7 Clients have	8 Usable Evaluations	2.0	93.6
11 Clients have	9 Usable Evaluations	3.1	96.8
4 Clients have	10 Usable Evaluations	1.1	97.9
1 Clients have	11 Usable Evaluations	0.2	98.2
1 Clients have	12 Usable Evaluations	0.2	98.5
0 Clients have	13 Usable Evaluations	0.0	98.5
1 Clients have	14 Usable Evaluations	0.2	98.8
2 Clients have	15 Usable Evaluations	0.5	99.4
0 Clients have	16 Usable Evaluations	0.0	99.4
1 Clients have	17 Usable Evaluations	0.2	99.7
1 Clients have	18 Usable Evaluations	0.2	100.0

TOTAL CLIENTS - 348

In summarizing this section, it must be concluded that the original plan to chart client progress by means of regular monthly evaluations did not prove feasible for the overwhelming majority of clients. Consequently, many of the anticipated statistical analyses, if not entirely precluded, are sharply limited with respect to the legitimate inferences that can be drawn.

4. Comprehensiveness of the Analyses. A final issue to be considered concerns the desirability of providing a thorough, detailed, and comprehensive analysis of the great mass of data obtained. In view of the many gaps and deficiencies encountered, it could be argued that only a rudimentary or partial analysis is warranted or even possible. It is certainly true that many of the standard and conceptually elegant statistical approaches are precluded.

On the other hand, the data available were secured at considerable expense in terms of time, effort, and money. Each item appearing on the data collection forms was included because of its presumed relevance to the problem of drug addiction. Follow-up evaluations were secured in the hope that meaningful trends could be detected.

In view of the potential importance of the data collected and in spite of the many deficiencies, it was decided that the wisest course would be to subject all data to as complete a series of analyses as could reasonably be defended. Furthermore, it was felt that all, rather than just portions, of the available data should be analyzed, even though this might mean creation of a fairly large number of tabular supplements. The analytical procedures finally decided upon are described in the section that follows.

C. Methods of Analysis

The task of the data analyst is to be brief but thorough, clear yet sophisticated. The most elegant analyses are the simplest ones possible consistent with the inherent complexities of the problem at hand.

Given the huge mass of data collected in the course of this project, it might be possible to spend years performing various types of statistical exercises. On the other hand, it is sometimes feasible to employ a limited number of very powerful yet efficient analyses to extract the bulk of the information contained within a much shorter period of time. By the same token, any additional analyses may be rendered largely redundant. None of this, of course, would be possible without the utilization of electronic computers and sophisticated mathematical programs.

Lengthy consideration of all of these points led to the adoption of the methods of analysis described below. The fact that these analyses produced 28 volumes of tables and other types of computer output may seem a contradiction of the brevity principle enunciated above. Nonetheless, it is felt that each of these analyses is essential to a

comprehensive, overall treatment of the data obtained, and that together they provide a basis for an adequate understanding of each program's operation and experience as reported.

1. Complete Client Register. The Complete Client Register (CCR) consists of a listing or roster, by program, of all clients for whom Form I data were submitted. As such, it does not constitute a data analysis in the proper sense of the term but rather represents a record of client participation in each program.

Two forms of the register are presented. CCR-1 lists, for each program separately, the client case numbers, name codes, dates of admission, and dates of subsequent evaluations, if any. In this manner, the extent of each client's recorded participation in a program may be traced. CCR-2 provides similar information but in a more abbreviated and symbolic form. Together, these registers provide the bases for calculating the number of client forms available at each evaluation point, cohort group membership, and total number of evaluations per client. Tables summarizing this information are presented at the beginning of each set of registers.

The primary purpose for constructing the registers was threefold: 1) to provide an accurate accounting of all of the data forms on file; 2) to define a conceptual system for arranging the data so that appropriate statistical analyses could be selected and employed; and 3) to serve as a check on the number of clients who should rightfully be included in any subsequent analyses. The register was definitely not intended for client identification. To preclude this possibility, clients are identified by case numbers and name codes known only to the individual programs.

Statistical Appendix I, volumes I-A through I-G, contains Complete Client Registers (CCR-1 and CCR-2) for each of the seven funded programs.

2. Tabular Presentation of Item Responses: Forms I and II. The two data collection forms consist of a series of questions, or items, with space provided for recording the client's coded response (or the interviewer's assessment of the client, as the case may be). From the beginning of the project, it was recognized that a major aspect of any analysis would be a program-by-program tabulation of client responses to each and every item. A tabulation of this type is usually referred to as a frequency distribution, i.e., for any given item, the possible alternative responses are listed in the leftmost column, and the number or frequency of clients giving each alternative response is listed in an adjacent column. Interpretation is facilitated if a percentage frequency distribution, i.e., the percent of clients giving each alternative response, is also provided.

In an effort to convey as much meaningful information as possible within a uniform tabular format, responses to each item were further classified by sex (male or female) and race (white or non-white). Thus

for each program, frequency and percentage frequency distributions of response to each and every item are provided for white (Caucasian) males, non-white (non-Caucasian) males, white females, and non-white females. Tests of significance with respect to differences in response distribution are provided for the following group contrasts: white males vs. non-white males; white males vs. white females; non-white males vs. non-white females; and white females vs. non-white females. For non-metric, categorical-type data, e.g., religious preference, group differences in response distribution were tested for significance by means of Chi Square. For metric and ordinal data, e.g., age, means and standard deviations were computed and differences between group means tested for significance by one-way analyses of variance.

Since Form II (Evaluative Information) was readministered to diminishing numbers of clients at subsequent monthly evaluation points, it was necessary to tabulate these data as well. It was observed, however, that only a small percentage of the total clients were evaluated beyond the fifth month. Thus, rather than proliferate analyses having relatively little meaning, it was decided to make separate tabulations for the first five monthly evaluations only. For clients with evaluations beyond their fifth month of association with a program, data emanating from their final (most recent) active evaluation, regardless of when this occurred, were displayed in a single series of tables.

Statistical Appendix II, volumes II-A through II-G, contains tabulations of client responses to each item appearing on Form I for each of the seven funded programs. (Items pertaining to individual client identification are, of course, excluded.) Statistical Appendix III, volumes III-A through III-G, presents similar tabulations for each item appearing on Form II. With respect to the latter, each item yields six tables--one for each of the six evaluation points mentioned above.

3. Trend Analyses Reflecting Changes over Time. The successive monthly tabulations of Form II data described in the preceding paragraph might be assumed to reflect changes in client status over time. Such an assumption might well be erroneous, since the data presented in these sequential tables emanate from smaller and smaller subsets of the original client group. Thus, it is not clear from such an analysis whether actual client change on a given variable has taken place or whether selective client drop-out is responsible for apparent differences in item response distribution. To answer this question, it is necessary to follow the same set of subjects over a specified period of time.

The analysis of repeated measures over time is usually referred to as trend analysis. The method used here was first described by Shaffer, Forbes, and DeFelice (1967) and subsequently employed in a social-psychiatric context by Michaux et al. (1969). Successive evaluations at approximately equal intervals are required, and missing data should be at a minimum. The level of measurement employed must be ordinal or higher (Siegel, 1956).

After due consideration, it was decided to trend the means of selected items for all clients having at least five consecutive evaluations beginning with the one obtained on admission. These clients were, in effect, those belonging to Cohort Group 5 and higher. Thus, all such analyses involved the first five monthly evaluations, and only clients having evaluations at these points were included. Separate analyses were performed for each of the seven funded programs.

It is clear that the clients belonging to Cohort Group 5 or higher represent but a small fraction of the total. Thus, generalization of any findings to the original group of clients is hazardous at best. Some indication of the representativeness of this sub-group may be afforded by comparing their initial status (on a measure) with initial status of the total group (on the same measure) as shown in the previous set of tabulations (Statistical Appendix III).

Trend Analyses were performed with respect to the following 13 items appearing on Form II: days worked, money earned by client, household earnings, opiate use, adhering to treatment, constructive use of free time, use of alcoholic beverages, obeying the law, mood-depressed, mood-elated, mood-anxious, mood-angry, and mood-suspicious. In order to maximize the number of subjects available for analysis, clients were not subdivided by race and sex as in the tabular presentations.

Statistical Appendix IV, volumes IV-A through IV-G, contains the trend analyses mentioned above for each of the seven funded programs.

4. Correlation Matrices and Factor Analyses. It has been said that science is the search for relationships among variables. Items of information are usually more meaningful when viewed collectively and their mutual interdependencies examined. Thus, while distributions of client responses to individual items on Forms I and II are informative in their own right, a deeper and more comprehensive understanding of the total situation may be provided by examining item interrelationships.

The tabulations contained in Statistical Appendices II and III already provide some information concerning relationships among variables. For example, all of the items appearing on Form II have been tabulated by sex, race, program, and monthly evaluation point, and the effects of these variables on distribution of response can be directly observed. In a similar manner, it would be possible to cross-tabulate items with respect to other variables, or even with respect to other items, depending upon what the investigator deems important.

There are two difficulties with the above approach if carried beyond a modest point. First, it is grossly inefficient and can lead to a seemingly endless proliferation of data displays, each presenting a view of the situation from a slightly different angle. Second, it is extremely difficult, if not impossible, for the human mind to grasp the subtleties and complexities of three-way, four-way, and higher order interactions among variables. Thus, what appears at first glance to be

a very simple and easily interpretable method of presentation becomes, on closer scrutiny, a cumbersome and unwieldy technique for the elucidation of relationships among a host of variables. Fortunately, a more appropriate methodology is available.

Many of the variables appearing on Forms I and II involve at least an ordinal level of measurement. Some examples are age, income, and frequency of drug use. The remaining categorical variables, e.g., type of military discharge, region of birth, etc., can be dichotomized and arbitrarily coded "one" or "zero." The entire set of variables can then be intercorrelated by means of the usual product-moment formula. The resulting correlation matrix can then be scrutinized for the presence of significant relationships.

After considerable study, 48 of the items appearing on Forms I and II were subjected to such an analysis. Two derived variables reflecting degree of client participation were also included: total number of monthly evaluations, and duration of program at time of client entry. (A complete list of variables is presented in Statistical Appendix IV.) Thus, except for missing observations, data on all 50 variables were available for each subject having an initial Form I and II, and these data provided the material for analysis. Data emanating from subsequent administrations of Form II were not included because of severe sample attrition. Analyses were performed for each program separately, and the samples were further subdivided by sex because of the possible pervasive and confounding influence of the latter on item intercorrelations.

A 50 X 50 correlation matrix is still a formidable statistical array. Some additional system of data reduction is needed for an adequate understanding of complex interrelationships. One such system is provided by the statistical technique known as factor analysis. In general, factor analysis seeks to "explain" or account for a large number of interrelationships in terms of a smaller number of "artificial" variates called factors, thereby reducing the conceptual problem involved to manageable proportions. In the present context, this technique was employed in an attempt to classify the major, independent dimensions present in the data obtained on admission, and to identify the most important variables defining or "marking" those dimensions. The success of such an endeavor is never more than partial, and its utility in the present context must, to a large extent, be left to the judgment of the technically sophisticated reader.

The 50 X 50 matrix was analyzed by the principal components method with unity in the diagonals. Factors emerging with latent roots in excess of unity were rotated to orthogonal simple structure by the varimax procedure (Clyde, Cramer, and Sherin, 1963). Since, in order to insure sampling stability, factor analyses should employ at least ten subjects for each variable entered in the original matrix (Nunnally, 1967), it was not appropriate to perform such an analysis with all 14 (seven programs x two sexes) subgroups. However, in view of the

exploratory nature of these analyses and the feasibility of cross-program comparison of results, data from subgroups having as few as 271 members were factor-analyzed. The results are presented in Statistical Appendix IV, volumes IV-A through IV-G.

5. Assessment and Prediction of Client Response to Treatment. As was noted in Chapter I, the legislation authorizing project funds required the collection of data relative to the evaluation of individuals receiving services, factors affecting relapse, and the overall effectiveness of treatment. Several of the analyses already described have a direct bearing on one or more of these issues. Unfortunately, the absence of regular monthly evaluations in all but a small percentage of the total cases precluded the assessment of treatment services on the basis of Form II information as originally planned. A somewhat different approach was therefore required.

Shortly before the end of the project data-collection phase, a letter was sent to each of the seven funded programs requesting their assistance in evaluating client response to treatment. (See Statistical Appendix IV.) Accompanying the letter was a computer print-out of the case numbers and name codes of those subjects for whom the recipient program had submitted at least three, usable, monthly evaluations (not necessarily consecutive), including the one obtained on admission. Programs having more than one treatment facility were also provided with the code number of the facility where the client was last evaluated.

Following each client's case number and name code on the computer print-out was a "Degree of Improvement" (treatment outcome) scale numbered from 0 (None--Worse or No Change) to 4 (Complete Success). Intermediate scale values were similarily defined. (See Statistical Appendix IV.) Program personnel were requested to rate each listed client on the basis of all available information. Ideally, this global rating was to be made by the counselor or interviewer having the greatest familiarity with the individual rated. Clients for whom fewer than three monthly evaluations had been previously submitted were not included in this assessment on the assumption that there had been insufficient contact on which to base a valid judgment. As it was, a sizable percentage of the client's listed were rated as "Unkown" or "Information Not Available" by program personnel. Still, the degree of cooperation shown by all of the programs in this task was gratifying.

One should be under no illusions concerning the reliability, validity, or equivalency across interviewers or programs of the ratings obtained. (The same comment holds true for all of the data collected.) Still, potential deficiencies should not blind one to potential values. The client assessments appear to have been made in good faith, and it seems likely that ratings of "0" or "1" reflect, on the average, lower degrees of client success that do ratings of "3" and "4". In any event, all ratings and their attendant definitions must be considered relative rather than absolute.

Two types of statistical analyses were performed. The first consisted of a tabulation of the ratings received from each program according to the standard format used in analyzing the items appearing on the two data collection forms. Thus, it was possible to observe the relationships of sex, race, and program to judged degree of client success in treatment.

A second, more elaborate analysis sought to uncover pretreatment correlates of client success. In brief, it was considered possible that certain items of information obtained on admission might have prognostic value. However, since the inclusion as possible predictors of all of the items appearing on admission Forms I and II would involve an unacceptable capitalization on chance relationships, the results of the previous efforts at data reduction through factor analysis were utilized. More specifically, it was decided to explore as possible predictors of client success a much smaller number of relatively independent variables, each of which would be representative of one and only one of the interpretable factor-dimensions that had previously emerged. A few additional variables were included because of their supposed prognostic value in earlier research. A complete list of the potential predictors utilized is given in Statistical Appendix IV.

The statistical technique used to explore the utility of the above variables in predicting judged client success in treatment is known as stepwise multiple linear regression. Briefly, each variable is first correlated (product-moment r) with the criterion--in this case, rated degree of success in treatment. Since the most effective and efficient combination of predictors is sought, the variable having the highest correlation with the criterion is the first one retained. To it is added (in the prediction equation) that variable of those remaining that yields the highest correlation with the criterion after the effect of the first variable is held constant or partialled out. This process is repeated until the inclusion of additional variables no longer results in significantly improved correlation with the criterion.

Multiple regression can involve many pitfalls, two of the most important being sampling variability and unreliability of both predictors and criterion (Nunnally, 1967; Wolins, 1967). The use of large samples tends to render these problems less serious. Another safeguard involves the replication of findings. Careful consideration was given to each of these issues.

As with the previous analyses, it was considered essential to explore prediction equations for each program separately. However, samples were not subdivided by race and sex; rather, these variables were included in the pool of potential predictors which was the same for all programs. Where sample size permitted, clients for whom ratings were available were randomly assigned to two groups, and prediction equations were developed separately for each group in an effort to assess the generality of the results obtained. If the results appeared

reasonably comparable, the groups were combined and a prediction equation for the total group was developed. Finally, results from each of the seven programs were compared for similarities and differences.

Statistical Appendix IV, volumes IV-A through IV-G, presents the relevant computations.

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VI. COMPREHENSIVE DATA ANALYSES: SUMMARIZATION OF FINDINGS

A. Introduction

The analyses described in the preceding chapter produced 28 volumes of listings, tabulations, and other types of computer output. Since the purpose of a table or other form of numerical analysis is to present the relevant data in as succinct yet comprehensive a manner as possible, the concerned reader would do well to examine these documents firsthand since they form the basis for all of the statements that follow.

Any narrative description of the vast amounts of information contained in the Statistical Appendices must, of necessity, be a summary. This is true not only because of project time limitations but also because, in a very real sense, no narrative can efficiently capture the nuances and subtleties inherent in the original quantitative presentation. To do so would require more space than that taken by the analyses themselves.

The task of any narrative interpretation, then, is to be selective, i.e., to direct the reader's attention to those aspects thought to be most important. In this process, various areas will be neglected that may be of particular interest to certain readers or of special relevance to some question, issue, or hypothesis. No apologies will be made for such "oversights," since it would clearly be impossible to address oneself to all of the many issues pertaining to drug addiction. Moreover, it would be unreasonable to expect one set of data, no matter how voluminous, to shed light on all of these issues.

The primary aim in performing all of these analyses was to provide a comprehensive source of information to which interested persons might refer in seeking answers to diverse questions. Thus, the Statistical Appendices could serve as the basis for a number of research reports, each concerned with some special area or directed at some specific aspect of the addiction problem. To the extent that such reports materialize and point the way to greater understanding in this difficult area, the labors of the data analysts will have been rewarded.

B. Summarization of Findings by Program

In the pages that follow, the major findings with respect to each program are summarized. In addition, a tabular comparison of the several programs with respect to selected variables is achieved. Before proceeding to these summaries, however, it would be well to alert the reader to certain conventions employed in the interests of economy of presentation.

The first convention might be termed the "assumption of veridicality." As was noted in Chapter V, little or no information is available concerning the reliability or accuracy of the raw data on which all of the findings are based. However, to point this out continually, either implicitly or explicitly, results in a very cumbersome mode of presen-

tation. Therefore, the results of all analyses are reported as though they were based on fact; the reader may entertain whatever reservations he deems appropriate.

The second convention has to do with the issue of statistical significance and the related issue of sampling. Some of the problems involved are also discussed in Chapter V, and the reader is referred to any standard statistical text for a more thorough consideration of these matters. In the present context, the results of the many significance tests performed are treated as though all of the assumptions underlying their use had been fulfilled. The extent to which such assumptions are warranted will vary with the context and the depth of the interpretation made. Again, the reader is forewarned. In any event, all statements that deal with relationships among variables or differences between groups are nominally significant at the .05 level or beyond. Exact probability levels as well as references to table numbers are omitted in order to promote fluency of presentation; the tables or analyses in question may be easily found in the Statistical Appendices. Table reference is facilitated by the fact that analyses pertaining to single items are arranged in the same order that the items appear on the data collection forms.

The third and final convention employed concerns the narrative format. In order to insure that the same basic issues were presented and discussed for each of the seven funded programs, a rather uniform narrative format was adopted. Such a system of presentation not only precludes the possibility of overlooking certain important aspects with respect to one or more of the programs, it also promotes and facilitates cross-program comparison. An additional advantage of no mean concern is the fact that a lucid mode of presentation need only be developed once, rather than seven times.

1. Program #1: Los Angeles, California

a. Tabulation of Item Responses. The Los Angeles program submitted data on a total of 321 clients, the overwhelming majority of whom were male (86%), Caucasian (94%), and of Mexican ethnic affiliation (86%). Non-white addicts entered the program only during the first quarter of its operation; from then on, non-white enrollment diminished sharply.

The average client remained in treatment 98 days and had between four and five evaluations (Form II's administered). Eighty-four per cent of the admitting interviewers were ex-addicts themselves, and 90% of all admissions were voluntary. Medical examinations on admission were not performed. The average client was 30 years old at the time of entry, with

non-white males being older than white males, and white females being younger than either. Over 90% were U.S. urban born. Given the preceding information concerning ethnic origin, it is not surprising that almost 75% were Catholic; however, sex and race differences were noted.

With respect to educational and occupational background, ten years of schooling was typical, with non-whites having somewhat more. It is interesting to note that 34% had never worked as long as one month at any one job, and an additional 20% had worked less than six months in such a capacity. Most (79%) had never served in the U.S. armed forces; of those who did, only a few received less than an honorable discharge. The expected sex differences on these variables were, of course, much in evidence.

Less than 3% of those on whom data were available had never been arrested, and the mean number of arrests was more than eleven. White females were arrested fewer times, and usually at a somewhat older age, than their male counterparts. The modal age of first arrest for the entire group was between 13 and 15 years. Most arrests appear to have been for drug-related acts. The longest uninterrupted time served in prison averaged more than 30 months, with non-white males serving longer than others.

Turning now to previous drug usage, the longest time off drugs since regular use began yielded an average of 35 months--a figure which correlates significantly with longest time spent in jail. More than 34% had never voluntarily tried to stop using drugs, and over 77% had had no prior treatment for drug addiction. Although marijuana and the opiates were used often, or almost daily, during the period of maximum drug use, all other substances were used only occasionally, or not at all, by the typical addict treated. If all drugs are ranked according to average age at first use, the ranking, beginning with the earliest, is as follows: inhalants, marijuana, barbiturates, amphetamines, opiates, and psychedelics. Inhalants had an average age of first use of 14.5 years; the corresponding figure for psychedelics was 22.1 years.

The above findings with respect to age at first use should not be interpreted to imply the existence of a natural sequence of drug experimentation. This might be true only if all clients had used all of the substances mentioned. On the contrary, approximately one-fourth had never used barbiturates, and a similar proportion had never used amphetamines. In addition, 87% had never used inhalants, and 88% had never used psychedelics. Only two drugs, marijuana and the opiates, had been used by 80% or more of the entire group.

In an effort to shed light on the issue of drug sequence, data from those 140 clients who had tried all four of the most frequently used substances across programs (marijuana, opiates, amphetamines, barbiturates) provided the basis for an additional analysis. For each of these 140 subjects, the four drugs mentioned were ranked for age of first use and the average rank for each drug was computed. The resulting mean rank order was as follows: marijuana, amphetamines, barbiturates, opiates. Kendall's coefficient of concordance (W) computed on these data was .32, a value significant beyond the .01 level and suggesting that a typical sequence of usage does, in fact, exist. The mean rankings for amphetamines and barbiturates were practically interchangeable, however.

Only 7% of the entire group were taking drugs by vein at the time of admission. (The majority had presumably stopped shortly before.) The overwhelming majority (87%) were started by a drug user who was usually (63%) a friend of the same age. Less than 2% were started by pushers. Most (81%) started out of curiosity due to friends' influence.

None of the previously mentioned substances was being used by more than approximately 10% of the addicts at the time of admission. There is evidence, however, that opiate use did increase among those who remained in the program: of those who remained, over 30% were using opiates by their fifth month of association. Alcohol usage, for the most part, was described as "light-social." However, it was considered a problem in 10 to 20% of the cases at various points in time.

With respect to childhood home environment, the most noteworthy aspect is the fact that the father was absent from the home most of the time in fully 43% of the total cases. Interestingly enough, this situation was more typical of white females than of white males. Similarly, parents had been living together until client age ten in only 54% of the total cases. Over 14% did not even know their father's primary or usual job.

The disrupted marital and familial situations frequently noted in the childhood home environment had their counterparts in the addicts' current living arrangements. Only 15% were living with a spouse, and practically none was living with a non-relative of the opposite sex (not a spouse). The majority were either living alone, or with parents, in-laws, or other relatives. Forty-five per cent had never married.

On the average, between three and four persons lived in the client's household. In 55% of the cases, a person under 18 years of age was also present. Admitted drug usage by

these other family members was rare. Approximately 8% of the clients had one or more persons living with them who were undergoing drug treatment, however.

With respect to finances, legal jobs were not a source of income in 73% of the cases at the time of admission. Illegal activities were also denied as a source of income by 97%. Since alternative sources of income were also frequently denied, it is not clear how the clients were supported financially outside of the treatment setting. Almost 80% were unskilled and/or unemployed. The majority, nonetheless, aspired to a skilled manual occupation or higher. It is of interest that not a single client held a legal job at the time of his last active evaluation, although the number of days worked during the previous month did increase.

Turning now to miscellaneous items, the level of difficulty encountered in various problem areas, including skidding and hustling, seemed to remain rather stable or to improve slightly with treatment. The same might be said of the clients' mood.

Program services consisting of group and individual meetings were utilized by the majority of the addicts enrolled. With the exception of family contacts, other program services were either unavailable or rarely utilized. Urine chromatography tests were almost never performed. Nonetheless, full or partial satisfactory use of program services was claimed for 75 - 85% of all clients.

Finally, reliability of recorded data was considered satisfactory in more than 90% of the total cases, although attempts to verify the information obtained were almost never made. Subsequent to admission, clients were interviewed almost exclusively by staff who were themselves ex-addicts.

b. Trend Analysis. Although slightly less than one-fourth of the 321 clients admitted had five or more consecutive monthly evaluations, trend analyses were performed on this sub-group in an effort to evaluate client changes over time. The methodology employed and the variables chosen were discussed in the preceding chapter; only an overview of the results will be presented here.

Number of days worked in the past four weeks showed a substantial increase in the month following admission but levelled off thereafter. The same was true of money earned, both individual and household. For example, individual income for the preceding month had a mean of $73.04 on admission but rose to a mean of $299.41 by the fifth month of association. (It is noteworthy that a similar trend at a somewhat lower

level can be discerned from the successive monthly item tabulations. The latter, however, because of missing evaluations, do not follow the same subset of clients over time.)

As mentioned earlier, there is evidence for a slight but significant linear increase in opiate use over the five-month period. Changes in problem areas during this period of time were negligible. Similarly, mood exhibited little change with the exception of "mood-elated" which showed a significant increase. The n's involved in the mood and problem area analyses were quite small because of frequently missing data on these particular items.

c. Correlation Matrices and Factor Analysis. As mentioned in the preceding chapter, 48 quantitative or dichotomous variables were selected from the two admission forms as being the most representative and meaningful of the total items available. Two additional variables were added: total number of Form II evaluations (thought to reflect client participation in treatment), and age of program at time of client entry (thought to reflect changes, over time, in program orientation or operation). The resulting 50 variables were intercorrelated for men and women separately, since it was felt that certain relationships might prove to be a function of sex. A principal components factor analysis was subsequently performed on the male data only, since data on fewer than 50 females were available for analysis.

As was expected, the overwhelming majority of the 1,225 correlations obtained for each sex group were small and not statistically significant. Without exception, the few very high correlations obtained reflected logical dependencies, such as frequency of present use of opiates and mainlining, or earnings and number of days worked in the preceding month. On the other hand, there were a few correlations that were sizable in the male group but insignificant in the female. An example of such was income from illegal activities and daily cost of habit. The increased use of ex-addict interviewers as the program progressed was also discernable from the correlation matrix. Total household income was also correlated with program age, at least in the male sample.

The interested and technically sophisticated reader would do well to examine the actual correlation matrices accompanying this report. By so doing, confirmation or denial of a number of interesting hypotheses, at least for these samples, might well be afforded.

As mentioned above, a principal components factor analysis was carried out on the male sample only. Most of the variables in the original correlation matrix were based

on approximately 275 cases; for relationships involving mood and problem-area ratings, the n's dropped to less than half that number.

From the 50 X 50 matrix, 23 principal components having eigenvalues in excess of 0.8 were extracted. Eighteen had eigenvalues greater than 1.00 and were retained for subsequent orthogonal rotation by the objective varimax procedure. These 18 factors accounted for 69.8% of the total variance contained in the original 50 variables. Identification and labelling of rotated factors were accomplished through inspection of the factor loadings, i.e., factors were labelled in accordance with the size and exclusiveness of factor-variable correlations. Identification was also facilitated by means of cross-program comparisons (cross-validation of factor structure).

The eighteen factors retained were listed in the order of their appearance following varimax rotation. They have been tentatively labelled as follows: 1) Frequency of present opiate use; 2) Longest time off drugs since regular use began; 3) Number of days worked during past four weeks; 4) Total number of arrests; 5) Age at first drug use; 6) Total number of evaluations; 7) Number of times voluntarily attempted to stop drug use; 8) Race; 9) Current problem areas in adjustment; 10) Income from welfare; 11) Socio-economic status; 12) Type of admission; 13) Number of arrests for acts against persons; 14) Number of persons living in household; 15) Number of persons in household using drugs; 16) Present use of alcohol; 17) Military service; and 18) Number of arrests for sexual acts.

It is well-known that factor analysis is an eminently useful approach to the problem of data reduction. A satisfactory solution to this problem was essential to the subsequent exploration of variables predictive of treatment success. Investigators planning future revisions of the data collection forms would do well to consider the results of the several program factor analyses in their selection of items to be retained or omitted.

d. Assessment of Client Success in Treatment. In accordance with the methodology described in Chapter V, the case numbers and name codes of all 141 clients having at least three active evaluations were referred to program personnel together with instructions for rating degree of client success in treatment. Thirty-nine (28%) of these 141 clients were not rated by the program staff, presumably because the necessary information was unavailable.

Of the 102 clients for whom success ratings were made, 34 (33%) were considered unimproved or worse. Eleven (11%) were considered slightly improved; 16 (16%) were considered

moderately improved; 33 (32%) were considered markedly improved; and 8 (8%) were considered complete successes. On a five-point scale ranging from zero to four, the average degree of rated success was 1.7--a value ranging between slight and moderate.

It should be noted that the basis for these ratings was not made explicit, and that their reliability and validity are open to question. Moreover, there is no way of determining to what extent any improvement, or the lack of it, was a function of treatment efforts. Future attempts at rehabilitation would do well to incorporate a reliable and objective evaluation procedure as an integral part of program operation.

e. Prediction of Client Success in Treatment. It is generally accepted that the discovery of valid prognostic indicators is a powerful weapon in the fight to understand and control any disease process. Such a discovery can, at the very least, help to identify those persons for whom existing treatment modalities are ineffective or, at the other extreme, unnecessary. Appropriate steps can then be taken to insure the most efficient utilization of available resources together with the introduction of alternative techniques to deal with currently refractory cases. The legislation authorizing the funding of the various programs to combat narcotic addiction clearly recognized the importance of prognostic efforts in this area and directed that appropriate research along these lines be undertaken.

The discovery of valid prognostic indices or signs is frequently hampered by three difficulties. The first, often referred to as "the criterion problem," has to do with the unreliability and/or invalidity of the outcome (degree of success) measure itself. Unless this criterion is both reliable and valid, attempts at its prediction are either impossible or irrelevant. A second difficulty concerns the number of cases available for study. It appears to be axiomatic in the area of prognostic research that large n's are essential to the discovery of replicable findings. The third problem has to do with changes in the environmental setting. Prognostic indices found to be effective under one set of circumstances may be of little value under another. For all of these reasons, the present attempts to uncover predictors of treatment success must be considered no more than preliminary or exploratory.

As mentioned earlier, the technique used to search for possible prognostic indices is known as step-wise multiple linear regression. Potential predictors of treatment success included 23 variables, each representative of one, and only one, factor identified in one or more of the eight factor analyses previously performed. Selection of variables to represent factors was made on the basis of the following criteria: 1) high factor loadings; 2) likelihood of reliable measurement;

3) ease of interpretation; and 4) existence, where possible, of at least an ordinal level of measurement. Measures obtained subsequent to client admission were, of course, deleted from consideration. The variables of age, sex, and marital status were added to the pool of potential predictors in the interest of completeness.

Because of missing data, not all of the variables in the predictor pool could be tried in each of the seven programs. To do so would have reduced the avaiable n's to wholly impractical levels. In any event, and with the possible exception of New York, the numbers of subjects available for analysis were too small to permit much confidence in the replicability of any findings. Nonetheless, the problem of replicability was explored in those programs having usable data on more than 100 cases by first applying the regression technique separately to the two randomly-determined halves of the sample. Obviously, more confidence can be placed in the validity of those predictors that appeared to have utility in both portions. Still, all results must be considered tentative and subject to confirmation of disconfirmation through future research.

For the Los Angeles sample, 22 variables were entered into the correlation matrix along with the success ratings in an attempt to predict the latter. These were: Age, sex, race, marital status, type of admission, ethnic group membership, years of education, military service, total number of arrests, number of arrests for acts against persons, number of arrests for drug-related acts, longest period of time off drugs, number of times voluntarily attempted to stop using drugs, frequency of present non-opiate use, age of first non-opiate use, frequency of present opiate use, started by a "pusher," current use of alcohol, parents living together until client age ten or beyond, current income from welfare, number of days worked in the previous four weeks, and cost of current drug habit.

After deletion of six cases because of missing data with respect to one or more of the predictor variables used, 96 cases remained for analysis. Since this small number would not permit meaningful analysis by halves, the entire group was subjected to the step-wise regression procedure.

Perusal of the original correlation matrix revealed that none of the predictors correlated significantly with degree of success as rated. The highest correlation noted in this regard was with type of admission ($r=.13$), voluntary admissions showing a slight tendency toward higher success. A similar correlation ($r=.12$) was noted between the latter and higher income from welfare. Neither of these correlations reached significance at the .05 level.

The results of the step-wise multiple linear regression were likewise insignificant with respect to any combination of the 22 potential predictors. It must therefore be concluded that rated degree of success in the Los Angeles program was uncorrelated with any client information recorded at the time of admission.

2. Program #2: Washington, D.C.

a. Tabulation of Item Responses. The Washington program submitted data on a total of 734 clients, the overwhelming majority of whom were male (77%), and non-white (88%). Although white addicts entered the program throughout its entire period of operation, the percentage of these remained low. Females remained longer in the program than males, and non-whites remained longer than whites.

The average client remained in treatment 50 days and had between two and three evaluations (Form II's administered). Eighty-four percent of the admitting interviewers were ex-addicts themselves, and 76% of all admissions were voluntary or voluntary-urged. Medical examinations on admission were performed on 33% of all clients. The average client was 27 years old at the time of entry, and over 90% were U.S. urban born. By way of religious preference, over 50% were Protestant; however, sex and race differences were noted.

With respect to educational and occupational background, ten years of schooling was typical, with whites having significantly more. It is interesting to note that 30% had never worked as long as one month at any one job, and an additional 21% had worked less than six months in such a capacity. Most (81%) had never served in the U.S. armed forces; of those who did, 18% received less than an honorable discharge. The expected sex differences on these variables were, of course, much in evidence.

Only eighteen percent of those on whom data were available had never been arrested, and the mean number of arrests was five. Non-white females were arrested more times but at an older age than their male counterparts. Race differences were also noted with respect to age at first arrest, with non-white males being younger than whites.

The modal age of first arrest for the entire group was between 16 and 18 years. Arrests appear to have been made most frequently for acts against property. The longest uninterrupted time served in prison averaged more than 17 months, with non-white males serving longer than white males.

Turning now to previous drug usage, the longest time off drugs since regular use began yielded an average of approximately

13 months -- a figure which correlates significantly with longest time spent in jail. More than 26% had never voluntarily tried to stop using drugs, and over 58% had had no prior treatment for drug addiction. Marijuana and the opiates were the only drugs used often, or almost daily, by more than one-fourth of the clients during the period of maximum drug use. If all drugs are ranked according to average age at first use, the ranking, beginning with the earliest, is as follows: inhalants, marijuana, psychedelics, barbiturates, opiates, and amphetamines. Inhalants had an average age of first use of 16.7 years; the corresponding figure for amphetamines was 20.8 years.

The above findings with respect to age at first use should not be interpreted to imply the existence of a natural sequence of drug experimentation. This might be true only if all clients had used all of the substances mentioned. On the contrary, over 90% had never used inhalants or psychedelics. In addition, 87% had never used barbiturates, and 81% had never used amphetamines. Only the opiates had been used by the overwhelming majority of the entire group.

In an effort to shed light on the issue of drug sequence, data from those 46 clients who had tried all four of the most frequently used substances across programs (marijuana, opiates, amphetamines, barbiturates) provided the basis for an additional analysis. For each of these 46 subjects, the four drugs mentioned were ranked for age of first use and the average rank for each drug was computed. The resulting mean rank order was as follows: marijuana, amphetamines, barbiturates, and opiates. Kendall's coefficient of concordance (W) computed on these data was .12, a value significant beyond the .01 level and suggesting that a typical sequence of usage does, in fact, exist.

A total of 68% of the entire group was taking drugs by vein at the time of admission. The average daily cost of habit was $64.26. The overwhelming majority (89%) were started by a drug user who was usually (86%) a friend of the same age or older. Only 2% were started by pushers. Most (80%) started out of curiosity due to friends' influence.

With the exception of marijuana and the opiates, no other drugs were being used by more than 10% of all clients at the time of admission. More than 90% did not use alcohol at all or described their drinking habits as "light-social." Alcohol usage did not increase as a problem.

With respect to childhood home environment, the most noteworthy aspect is the fact that the father was absent from the home most of the time in fully 45% of the total cases. Similarly, parents had been living together until client age ten in only 53% of the total cases. Thirty-three per cent did not know their father's primary or usual job.

The disrupted marital and familial situations frequently noted in the childhood home environment had their counterparts in the addicts' current living arrangements. Only 19% were living with a spouse, and practically none was living with a non-relative of the opposite sex (not a spouse). The majority were either living alone, or with parents, in-laws, or other relatives. Over 51% had never married.

On admission, clients had an average of four persons living in their households. In 44% of the cases, a person under 18 years of age was also present. Admitted drug usage by these other family members was rare. Approximately 5% of the clients had one or more persons living with them who were undergoing drug treatment, however.

With respect to finances, legal jobs were a source of income in only 29% of the cases at the time of admission. However, illegal activities were denied as a source of income by 67% and family support was denied by 73%.

Although 18% of the clients claimed some skills, almost 50% were unskilled and/or unemployed at the time of admission. The majority, nonetheless, aspired to a skilled manual occupation or higher. Over 45% of the clients held a legal job at the time of their last active evaluation.

Turning now to miscellaneous items, the level of difficulty encountered in various problem areas, including skidding and hustling, seemed to remain rather stable or to improve slightly with treatment. The same might be said of the clients' mood.

Program services consisting of group and individual meetings were used by the majority of the addicts enrolled. Also utilized were family contacts and medical treatment. All other services offered were used by less than 25% of the clients.

Each month at least 50% of the remaining clients were given urine chromatography tests. The percentage of clients reported positive for opiates ranged from 11% at evaluation 1 to 31% at evaluation 3. Full or partial-satisfactory use of program services was claimed for at least 30% of all clients from evaluation point 2 onward.

Finally, reliability of recorded data was always considered satisfactory in at least 50% of the total cases, and attempts to verify the information obtained were made on approximately the same number.

b. Trend Analysis. Although only 39 (5%) of the 734 clients reported had five or more consecutive monthly evaluations,

trend analyses were performed on this subgroup in an effort to evaluate client changes over time. The methodology employed and the variables chosen were discussed in the preceding chapter; only an overview of the results will be presented here.

Number of days worked in the past four weeks showed a substantial increase in the month following admission but levelled off somewhat thereafter. The same was true of money earned, both individual and household. For example, individual income for the preceding month had a mean of $70.82 on admission but rose to a mean of $296.17 by the fifth month of association. (It is worthy of note that a similar trend can be discerned from the successive monthly item tabulations. The latter, however, because of missing evaluations, do not follow the same subset of clients over time.)

For this small subgroup, there was no evidence of any significant linear change in opiate use over the five-month period. Changes in mood and in problem areas during this period of time were also negligible. It must be emphasized, however, that the n's involved in the Washington, D.C. trend analyses were all quite small.

c. Correlation Matrices and Factor Analysis. As mentioned in the preceding chapter, 48 quantitative or dichotomous variables were selected from the two admission forms as being the most representative and meaningful of the total items available. Two additional variables were added: total number of Form II evaluations (thought to reflect client participation in treatment), and age of program at time of client entry (thought to reflect changes, over time, in program orientation or operation). The resulting 50 variables were intercorrelated for men and women separately, since it was felt that certain relationships might prove to be a function of sex. A principal components factor analysis was subsequently performed on the male data only, since data on only 163 females were available for analysis.

As was expected, the overwhelming majority of the 1,225 correlations obtained for each sex group were small and not statistically significant. Without exception, the few very high correlations obtained reflected logical dependencies, such as frequency of present use of opiates and mainlining, or earnings and number of days worked in the preceding month. Also, items reflecting current opiate use correlated significantly with items relating to behavioral problems. In addition, there were a few correlations that were sizable in the female group but insignificant in the male. An example of such was daily cost of habit and number of people in the household using drugs (males: $r=-.02$; females: $r=.50$).

The interested and technically sophisticated reader would do well to examine the actual correlation matrices accompanying this report. By so doing, confirmation or denial of a number of interesting hypotheses, at least for these samples, might well be afforded.

As mentioned above, a principal components factor analysis was carried out on the male sample only. Most of the variables in the original correlation matrix were based on approximately 567 cases.

From the 50 X 50 matrix, 23 principal components having eigenvalues in excess of 0.8 were extracted. Eighteen had eigenvalues greater than 1.00 and were retained for subsequent orthogonal rotation by the objective varimax procedure. These 18 factors accounted for 68.2% of the total variance contained in the original 50 variables. Identification and labelling of rotated factors were accomplished through inspection of the factor loadings, i.e., factors were labelled in accordance with the size and exclusiveness of factor-variable correlations. Identification was also facilitated by means of cross-program comparisons (cross-validation of factor structure).

The eighteen factors retained were listed in the order of their appearance following varimax rotation. They have been tentatively labelled as follows: 1) Frequency of present opiate use; 2) Age at first drug use; 3) Number of days worked during past four weeks; 4) Total number of arrests; 5) Socio-economic status; 6) Mood; 7) Daily cost of opiate habit; 8) Number of persons living in household; 9) Number of times voluntarily attempted to stop drug use; 10) Longest time off drugs since regular drug use began; 11) Ex-addict interviewer; 12) Income from welfare; 13) Race; 14) Number of persons in household using drugs; 15) Started by a "pusher"; 16) Parents living in household up to client age ten; 17) Ethnic group; and 18) Present use of non-opiates.

It is well-known that factor analysis is an eminently useful approach to the problem of data reduction. A satisfactory solution to this problem was essential to the subsequent exploration of variables predictive of treatment success. Investigators planning future revisions of the data collection forms would do well to consider the results of the several program factor analyses in their selection of items to be retained or omitted.

d. Assessment of Client Success in Treatment. In accordance with the methodology described in Chapter V, the case numbers and name codes of all 106 clients having at least three active evaluations were referred to program personnel together with instructions for rating degree of client success in treatment.

Thirty-six (34%) of these 106 clients were not rated by the program staff, presumably because the necessary information was unavailable.

Of the 70 clients for whom success ratings were made, 22 (31%) were considered unimproved or worse. Twenty-seven (39%) were considered slightly improved; 6 (9%) were considered moderately improved; 8 (11%) were considered markedly improved; and 7 (10%) were considered complete successes. On a five-point scale ranging from zero to four, the average degree of rated success was 1.3--a value ranging between slight and moderate.

It should be noted that the basis for these ratings was not made explicit, and that their reliability and validity are open to question. Moreover, there is no way of determining to what extent any improvement, or the lack of it, was a function of treatment efforts. Future attempts at rehabilitation would do well to incorporate a reliable and objective evaluation procedure as an integral part of program operation.

e. Prediction of Client Success in Treatment. For the Washington sample, 18 variables were entered into the correlation matrix along with the success ratings in an attempt to predict the latter. These were: Age, sex, race, marital status, ethnic group membership, years of education, military service, total number of arrests, number of arrests for acts against persons, number of arrests for drug-related acts, longest period of time off drugs, number of times voluntarily attempted to stop using drugs, frequency of present non opiate use, age of first non-opiate use, frequency of present opiate use, started by a "pusher," current use of alcohol, and parents living together until client age ten or beyond.

After deletion of eight cases because of missing data with respect to one or more of the predictor variables used, 62 cases remained for analysis. Since this small number would not permit meaningful analysis by halves, the entire group was subjected to the step-wise multiple regression procedure.

Perusal of the original correlation matrix revealed that two of the predictors correlated significantly with degree of success as rated. These were "number of times voluntarily attempted to stop using drugs" (r=.31) and "started by a pusher" (r=.26). These figures indicate that persons who had more frequently voluntarily attempted to refrain from drug use were rated as showing more improvement, as were people who had been "started by a pusher." These relationships were quite small, however.

The results of the step-wise multiple linear regression must be interpreted with extreme caution because of the small number of cases, the relatively large number of potential predictors, and the consequent likelihood of capitalization upon chance relationships.

The degree of prediction of rated success reached an asymtote with the inclusion of the following four predictors (listed in order of entry into the step-wise multiple regression equation): number of times voluntarily attempted to stop using drugs, total number of arrests, started by a "pusher," and longest time off drugs. At that point, the multiple R was .46, and the percentage of criterion variance accounted for (R^2) was 21.5%. The associated F-ratio was 3.91, which with 4 and 57 degrees of freedom is nominally significant beyond the .01 level.

The above results should be considered tentative and subject to confirmation through future research. The four variables found to have prognostic value in this study could form the basis for further predictive efforts in this particular geographical area.

Program #3: Chicago, Illinois

a. Tabulation of Item Responses. The Chicago program submitted data on a total of 348 clients, the overwhelming majority of whom were male (78%), and non-white (79%). Twenty-one per cent of the whites were Puerto Rican, and 22% of the non-whites claimed an ethnic affiliation of "other" (usually black or Afro-American).

The average client remained in treatment 134 days and had between three and four evaluations (Form II's administered). Only 6% of the admitting interviewers were ex-addicts themselves, and 89% of all admissions were voluntary. Medical examinations on admission were performed on fewer than 15%. The average client was 32 years of age at the time of entry, with males being older than females, and non-whites being older than whites. Seventy-seven per cent were U.S. urban born, and 7% were Puerto Rican born. Whites were predominantly Catholic (76%), while non-whites were more often Protestant (54%).

With respect to educational and occupational background, the average client had between ten and eleven years of schooling. It is interesting to note that 18% had never worked as long as one month at any one job, and an additional 22% had worked only six months or less in such a capacity. White females had worked for shorter periods than had non-white females, and

non-white females for shorter periods than non-white males. Most (64%) had never served in the U.S. armed forces, and fewer white males had military service records than had non-white males. Of all who served, 35% received less than an honorable discharge. The expected sex differences on these variables were, of course, much in evidence. Over 80% of the clients claimed a degree of training and/or experience that involved at least some skills.

Less than 5% had never been arrested, and the mean number of arrests was more than eleven. White females were arrested fewer times than were non-white females, and white males were arrested at an earlier age than non-white males. The modal age of first arrest for the entire group was between 16 and 18 years. Many of the arrests of non-white females were for sexual acts. The longest uninterrupted time served in prison averaged more than 24 months, with sex and race differences noted.

Turning now to previous drug usage, the longest time off drugs since regular use began yielded an average of 29 months--a figure which correlates significantly with longest time spent in jail. Twenty-three per cent had never voluntarily tried to stop using drugs, and over 43% had had no prior treatment for drug addiction. Although marijuana and the opiates were used often, or almost daily, during the period of maximum drug use, all other substances were used only occasionally, or not at all, by the typical addict treated. If all drugs are ranked according to average age at first use, the ranking, beginning with the earliest, is as follows: marijuana, inhalants, opiates, amphetamines, barbiturates, and psychedelics. Marijuana had an average age of first use of 16.6 years; the corresponding figure for psychedelics was 23.2 years.

The above findings with respect to age at first use should not be interpreted to imply the existence of a natural sequence of drug experimentation. This might be true only if all clients had used all of the substances mentioned. On the contrary, approximately 59% had never used barbiturates, and 68% had never used amphetamines. In addition, 92% had never used inhalants, and over 90% had never used psychedelics. Only marijuana and/or the opiates had been used by 85% or more of the entire group.

In an effort to shed light on the issue of drug sequence, data from those 57 clients who had tried all four of the most frequently used substances across programs (marijuana, opiates, amphetamines, barbiturates) provided the basis for an additional analysis. For each of these 57 subjects, the four drugs mentioned were ranked for age of first use and the average rank for each drug was computed. The resulting mean rank

order was as follows: marijuana, amphetamines, barbiturates, opiates. Kendall's coefficient of concordance ($\underline{W}$) computed on these data was .16, a value significant beyond the .01 level and suggesting that a typical sequence of usage does, in fact, exist. The mean rankings for amphetamines and barbiturates were practically interchangeable, however.

At least 80% of the entire group were taking drugs by vein at the time of admission. The average daily cost of habit was $42.49. The vast majority (77%) were started by a drug user who was usually (75%) a friend of the same age or older. Less than 4% were started by pushers. Most (60%) started out of curiosity due to friends' influence.

Over 80% of all clients were using opiates often, or almost daily, at time of admission. Although opiate use declined significantly during the clients' participation in the program, at least 16% of those remaining were still using opiates almost daily at the time of the fifth evaluation. Alcohol usage, for the most part, was described as "light-social." However, it was considered a problem in 30 to 37% of the cases at various points in time.

With respect to childhood home environment, the most noteworthy aspect is the fact that the father was absent from the home most of the time in fully 42% of the total cases. This situation was most typical of non-white females and least typical of white females. Similarly, parents had been living together until client age ten in only 51% of the total cases. Over 20% did not even know their father's primary or usual job.

The disrupted marital and familial situations frequently noted in the childhood home environment had their counterparts in the addicts' current living arrangements. Only 25% were living with a spouse, and only 6% were living with a non-relative of the opposite sex (not a spouse). The majority were either living alone, or with parents, in-laws, or other relatives. Twenty-seven per cent had never married.

On the average, between two and three persons lived in the client's household. In 29% of the cases, a person under 18 years of age was also present. Thirteen percent admitted drug usage by others in the household, and approximately 6% had one or more persons living with them who were also undergoing drug treatment.

With respect to finances, legal jobs were not a source of income in 72% of the cases at the time of admission.

Illegal activities were designated as a source of income by at least 59%, making these the single, most common source. Illegal activities were more characteristic of non-whites than of whites, and more than 40% of the non-white females admitted to such acts. Only 15% had a better than unskilled job at the time of admission. The majority, nonetheless, aspired to a skilled manual occupation or higher.

Turning now to miscellaneous items, the level of difficulty encountered in various problem areas, including skidding and hustling, seemed to remain rather stable or to improve slightly with treatment. The same might be said of the clients' mood. Over the five evaluation periods, "using free time constructively," and "association with bad company" were consistently found to be the most serious problem areas.

With regard to utilization of program services for the preceding four weeks, at least partially satisfactory use was claimed in 33% and 28% of the cases at the second and fifth evaluations, respectively. At these same evaluation points, individual meetings were reported used most often (64% and 58%), with group meetings also utilized (26% and 34%). Hospitalization (21% to 13%), and medical treatment (27% to 20%) tended to decrease over this same treatment period. Although urine chromatography tests were performed on over 30% of all clients, more than 10 tests were rarely performed on any one client in any given month.

Finally, reliability of recorded data was considered satisfactory in over 50% of the total cases, although attempts to verify the information obtained were made in less than 20%.

b. Trend Analysis. Although only 37 (11%) of the 348 clients reported had five or more consecutive monthly evaluations, trend analyses were performed on this sub-group in an effort to evaluate client changes over time. The methodology employed and the variables chosen were discussed in the preceding chapter; only an overview of the results will be presented here.

Number of days worked in the past four weeks increased substantially, particularly between the second and third evaluation periods. Individual income showed a significant linear increase, doubling from $51.00 to $106.00. Household income displayed a curvilinear trend over time.

There was a significant decrease in opiate use between the first and third periods with only a slight decrease thereafter, a finding corresponding to the results of the

cross-sectional tabulations. Changes in the problem areas, "use of free time" and "obeying the law," showed marked improvement. Among the mood questions, anxiety and suspicion both decreased over time. It must be emphasized, however, that the n's for the trend analyses were quite small since few clients had five or more consecutive monthly evaluations.

c. Correlation Matrices and Factor Analysis. As mentioned in the preceding chapter, 48 quantitative or dichotomous variables were selected from the two admission forms as being the most representative and meaningful of the total items available. Two additional variables were added: total number of Form II evaluations (thought to reflect client participation in treatment), and age of program at time of client entry (thought to reflect changes, over time, in program orientation or operation). The resulting 50 variables were intercorrelated for men and women separately, since it was felt that certain relationships might prove to be a function of sex. A principal components factor analysis was subsequently performed on the male data only, since data on fewer than 80 females were available for analysis.

As was expected, the overwhelming majority of the 1,225 correlations obtained for each sex group were small and not statistically significant. With few exceptions, the several very high correlations obtained reflected logical dependencies, such as frequency of present use of opiates and mainlining, or earnings and number of days worked in the preceding month. On the other hand, there were a few correlations that were sizable in the male group but insignificant in the female. An example of such was mainlining and longest time off drugs (male: $r=.62$; female: $r=.13$). The increase in ethnic group identification as the program progressed was clearly discernable from the correlation matrices. An increase in the number of involuntary admissions was also correlated with program age in both samples.

The interested and technically sophisticated reader would do well to examine the actual correlation matrices accompanying this report. By so doing, confirmation or denial of a number of interesting hypotheses, at least for these samples, might well be afforded.

As mentioned above, a principal components factor analysis was carried out on the male sample only. Most of the variables in the original correlation matrix were based on approximately 260 cases: for relationships involving mood and problem-area ratings, the n's were about 80% of that number.

From the 50 X 50 matrix, 22 principal components having eigenvalues in excess of 0.8 were extracted. Eighteen had eigenvalues greater than 1.00 and were retained for subsequent orthogonal rotation by the objective varimax procedure. These 18 factors accounted for 71.4% of the total variance contained in the original 50 variables. Identification and labelling of rotated factors were accomplished through inspection of the factor loadings, i.e., factors were labelled in accordance with the size and exclusiveness of factor-variable correlations. Identification was also facilitated by means of cross-program comparisons (cross-validation of factor structure).

The eighteen factors retained were listed in the order of their appearance following varimax rotation. They have been tentatively labelled as follows: 1) Number of days worked during past four weeks; 2) Longest time off drugs since regular use began; 3) Frequency of present opiate use; 4) Mood; 5) Total number of arrests; 6) Age at first drug use; 7) Socio-economic status; 8) Military service; 9) Number of persons in household using drugs; 10) Income from welfare; 11) Started by a pusher; 12) Total household income; 13) Marital status; 14) Race; 15) Number of persons living in household; 16) Number of arrests for sexual acts; 17) Number of arrests for drug use; 18) Ex-addict interviewer.

It is well-known that factor analysis is an eminently useful approach to the problem of data reduction. A satisfactory solution to this problem was essential to the subsequent exploration of variables predictive of treatment success. Investigators planning future revisions of the data collection forms would do well to consider the results of the several program factor analyses in their selection of items to be retained or omitted.

d. Assessment of Client Success in Treatment. In accordance with the methodology described in Chapter V, the case numbers and name codes of all 139 clients having at least three evaluations were referred to program personnel together with instructions for rating degree of client success in treatment. Seven (5%) of these 139 clients were not rated by the program staff, presumably because the necessary information was unavailable.

Of the 132 clients for whom success ratings were made, 32 (24%) were considered unimproved or worse. Sixty-six (50%) were considered slightly improved; 23 (17%) were considered moderately improved; 9 (7%) were considered markedly improved; and 2 (1.5%) were considered complete successes. On a five-

point scale ranging from zero to four, the average degree of rated success was 1.1--a value ranging between slight and moderate.

It should be noted that the basis for these ratings was not made explicit, and that their reliability and validity are open to question. Moreover, there is no way of determining to what extent any improvement, or the lack of it, was a function of treatment efforts. Future attempts at rehabilitation would do well to incorporate a reliable and objective evaluation procedure as an integral part of program operation.

e. Prediction of Client Success in Treatment. For the Chicago sample, 19 variables were entered into the correlation matrix along with the success ratings in an attempt to predict the latter. These were: Age, sex, race, marital status, type of admission, ethnic group membership, years of education, military service, total number of arrests, number of arrests for acts against persons, number of arrests for drug-related acts, longest period of time off drugs, number of times voluntarily attempted to stop using drugs, frequency of present non-opiate use, age of first non-opiate use, frequency of present opiate use, started by a "pusher," current use of alcohol, and parents living together until client age ten or beyond.

After deletion of fourteen cases because of missing data with respect to one or more of the predictor variables used, 118 cases remained for analysis. In an effort to cross-validate any predictors that might emerge, the sample was randomly divided into two equal halves, and correlation matrices and step-wise multiple linear regressions were computed on each half separately as well as on the total sample.

In one half of the sample, four significant correlations with rated degree of success were found. These were: race (r=-.32), started by a pusher (r=.31), ethnic group affiliation (r=.30), and number of times attempted to stop using drugs (r=.25). In the other half, significant correlations were found between the criterion and sex (r=.33) and present use of alcohol (r=.28).

For the entire sample, three of the 19 potential predictors correlated significantly with degree of success as rated: race (r=-.28), use of alcohol (r=.22), and ethnic group affiliation (r=-.20). These findings suggest the tendency for non-whites, persons with greater alcohol usage, and those without ethnic group affiliation to have higher ratings of success. These relationships, however, are quite small.

For both samples combined, the degree of prediction of rated success reached an asymtote with the inclusion of the following six predictors (listed in order of entry into the step-wise multiple regression equation): race, present use of alcohol, number of arrests for acts against persons, present use of opiates, type of admission, and number of times attempted to stop using drugs. At that point, the multiple R was .45, and the percentage of criterion variance accounted for (R^2) was 19.8%. The associated F-ratio was 4.58, which with 6 and 111 degrees of freedom is nominally significant beyond the .01 level.

Variables emerging as significant predictors in both halves of the total sample were type of admission, present use of opiates, and race.

The above results should be considered tentative and subject to confirmation through future research. The six variables found to have prognostic value in this study could form the basis for further predictive efforts in this particular geographic area.

4. Program #4: New Jersey (Statewide)

a. Tabulation of Item Responses. The New Jersey program submitted data on a total of 995 clients, the overwhelming majority of whom were male (84%) and non-white (61%). One of the most interesting aspects of these descriptive data concerned the matter of ethnic identification: an unusually high percentage (32%) indicated the category "other." A perusal of the forms suggested that non-whites showed a strong sense of black identity, and that whites frequently indicated an "Irish" or "German" ethnic affiliation. In addition, time of client entry into the program showed a marked difference by race; however, this can be explained by the fact that new centers were opened at various times in widely scattered geographical areas.

The average client remained in treatment 77 days and had between two and three evaluations (Form II's administered). Sixty-eight per cent of all admissions were voluntary or voluntary-urged; however, whites had a higher rate of non-voluntary entry than did non-whites. Medical examinations on admission were performed on less than 3% of the total. The average client was 25 years of age at the time of entry, with sex and race differences on this variable noted. Approximately 90% were U.S. urban born. Whites were predominantly Catholic (80%), and non-whites were usually Protestant (over 50%).

With respect to educational and occupational background, ten years of schooling was most typical. It is interesting to note that 33% had never worked as long as one month at any one job, and an additional 20% had worked less than six months in such a capacity. Most (80%) had never served in the U.S. armed forces; of those who did, 25% received less than an honorable discharge. The expected sex differences on these variables were, of course, much in evidence.

Less than 10% of those on whom data were available had never been arrested, and the mean number of arrests was between five and six. Females were arrested fewer times and usually at a somewhat older age than their male counterparts, with non-white females being older at time of first arrest than others. The modal age of first arrest for the entire group was between 16 and 18 years. Most arrests appear to have been for drug-related acts and acts against property. The longest uninterrupted time served in prison averaged more than 11 months, with non-whites serving longer than whites and white males serving longer than white females.

Turning now to previous drug usage, the longest time off drugs since regular use began yielded an average of 12 months--a figure which correlates significantly with longest time spent in jail. Only 17% had never voluntarily tried to stop using drugs, but over 56% had had no prior treatment for drug addiction. White males had been treated more often for drug addiction than had non-white males. However, the latter had remained off drugs for longer periods.

The opiates were used often, or almost daily, during the period of maximum drug use by more than 90% of the clients; all other substances were used only occasionally, or not at all, by most of the addicts treated. If all drugs are ranked according to average age at first use, the ranking, beginning with the earliest, is as follows: inhalants, marijuana, barbiturates, amphetamines, opiates, and psychedelics. Inhalants had an average age of first use of 14.9 years; the corresponding figure for psychedelics was 18.9 years.

The above findings with respect to age at first use should not be interpreted to imply the existence of a natural sequence of drug experimentation. This might be true only if all clients had used all of the substances mentioned. On the contrary, over one half had never used barbiturates, and 64% had never used amphetamines. In addition, 76% had never used inhalants, and 83% had never used psychedelics. Only marijuana and/or the opiates had been used by 80% or more of the entire group.

In an effort to shed light on the issue of drug sequence, data from those 245 clients who had tried all four of the most frequently used substances across programs (marijuana, opiates, amphetamines, barbiturates) provided the basis for an additional analysis. For each of these 245 subjects, the four drugs mentioned were ranked for age of first use and the average rank for each drug was computed. The resulting mean rank order was as follows: marijuana, barbiturates, amphetamines, opiates. Kendall's coefficient of concordance (W) computed on these data was .15, a value significant beyond the .01 level and suggesting that a typical sequence of usage does, in fact, exist.

At least 79% of the entire group were taking drugs by vein at the time of admission. The average daily cost of habit was $25.92. The overwhelming majority (90%) were started by a drug user who was usually (87%) a friend of the same age or older. Only one per cent were started by a pusher. Most (64%) had started out of curiosity due to friends' influence.

It appears that even though non-whites reported similar influences leading to addiction as did whites, they became less involved in using non-opiates (i.e., barbiturates, etc.). Opiates were the only drugs being used often, or almost daily, by more than 10% of the addicts at the time of admission. There is also evidence that opiate use decreased among those who remained in the program. Alcohol usage, for the most part, was described as "light-social" or "not at all."

With respect to childhood home environment, the most noteworthy aspect is the fact that the father was absent most of the time in fully 38% of the total cases. This situation, however, was less typical of white males than of the others. Parents had been living together until client age ten in 63% of the total cases, with this again being more typical of whites than of non-whites.

The disrupted marital and familial situations frequently noted in the childhood home environment had their counterparts in the addicts' current living arrangements. Only 13% were living with a spouse, and very few were living with a non-relative of the opposite sex (not a spouse). The majority were either living alone, or with parents, in-laws, or other relatives. Only 1% stated that they had "no stable living arrangements" at time of entry into the program. Fifty-six per cent had never married.

On the average, between three and four persons lived in the client's household at the time of admission, and this figure remained fairly stable throughout the period of par-

ticipation. In 44% of the cases, a person under 13 years of age was also present. Eight per cent admitted drug usage by other family members, and approximately 6% had one or more persons living with them who were undergoing drug treatment.

With respect to finances, legal jobs were a source of income in 18% of the cases at the time of admission. Illegal activities were declared as a source of income by 22%. Twenty-seven per cent claimed family support. Interestingly enough, "public assistance-other" increased steadily from 6% at admission to more than 30% at the time of the fifth evaluation. Income from illegal activities was not claimed by more than 6% of the clients after the first evaluation period. Less than 20% claimed unskilled and/or unemployed as their highest level of training and/or experience.

Turning now to miscellaneous items, the level of difficulty encountered in various problem areas, including skidding and hustling, seemed to remain rather stable or to improve slightly with treatment. The same might be said of the clients' mood.

The five most frequently used program services were: 1) group meetings, 2) individual meetings, 3) full day care, 4) full residential care, and 5) family contacts. The percentage of remaining clients using these services increased steadily over the five evaluation periods. Full or partial satisfactory use of program services was reported by 31% of the clients at the time of the second evaluation and increased to 60% by the time of the fifth evaluation. The use of urine chromatography tests was substantial and increased with continued participation in the program.

Finally, reliability of recorded data was considered satisfactory in more than 50% of the total cases on admission. Attempts to verify the information obtained rose from 10% to over 50% by the fifth evaluation period.

b. Trend Analysis. Although slightly less than 10% of the 995 clients reported had five or more consecutive monthly evaluations, trend analyses were performed on this sub-group in an effort to evaluate client changes over time. The methodology employed and the variables chosen were discussed in the preceding chapter: only an overview of the results will be presented here.

As mentioned earlier, there is evidence for a significant decrease in opiate use over the five-month period, particularly within the first month following admission. Changes in problem areas during this same period were most pronounced in the areas of "using free time constructively" and "obeying

the law." Mood exhibited little change with the exception of "mood-depressed" and "mood-anxious," both of which showed significant decreases. The n's involved in the mood and problem area analyses were sometimes quite small because of frequently missing data on these particular items.

c. Correlation Matrices and Factor Analysis. As mentioned in the preceding chapter, 48 quantitative or dichotomous variables were selected from the two admission forms as being the most representative and meaningful of the total items available. Two additional variables were added: total number of Form II evaluations (thought to reflect client participation in treatment), and age of program at time of client entry (thought to reflect changes, over time, in program orientation or operation). The resulting 50 variables were intercorrelated for men and women separately, since it was felt that certain relationships might prove to be a function of sex. A principal components factor analysis was subsequently performed on the male data only, since data on fewer than 200 females were available for analysis.

As was expected, the overwhelming majority of the 1,225 correlations obtained for each sex group were small and not statistically significant. Without exception, the few very high correlations obtained reflected logical dependencies, such as frequency of present use of opiates and mainlining, or earnings and number of days worked in the preceding month. On the other hand, there were a few correlations that were sizable in the female group but insignificant in the male. An example of such was number of days worked in the past four weeks and number of times treated for addiction (Female: r=.53; Male: r=-.06). Ethnic group affiliation was also correlated with program age in both samples.

The interested and technically sophisticated reader would do well to examine the actual correlation matrices accompanying this report. By so doing, confirmation or denial of a number of interesting hypotheses, at least for these samples, might well be afforded.

As mentioned above, a principal components factor analysis was carried out on the male sample only. Most of the variables in the original correlation matrix were based on approximately 800 cases; for relationships involving mood and problem-area ratings, the n's dropped to about half that number.

From the 50 X 50 matrix, 22 principal components having eigenvalues in excess of 0.8 were extracted. Sixteen had eigenvalues greater than 1.00 and were retained for subsequent orthogonal rotation by the objective varimax procedure. These 16 factors accounted for 63.6% of the total variance

contained in the original 50 variables. Identification and labelling of rotated factors were accomplished through inspection of the factor loadings, i.e., factors were labelled in accordance with the size and exclusiveness of factor-variable correlations. Identification was also facilitated by means of cross-program comparisons (cross-validation of factor structure).

The sixteen factors retained were listed in the order of their appearance following varimax rotation. They have been tentatively labelled as follows: 1) Age at first drug use; 2) Present use of opiates; 3) Number of days worked during past four weeks; 4) Race; 5) Longest time off drugs since regular use began; 6) Number of arrests; 7) Mood; 8) Number of persons living in household; 9) Present use of non-opiates; 10) Type of admission; 11) Socio-economic status; 12) Current problem areas in adjustment; 13) Number of times voluntarily attempted to stop drug use; 14) Started by a pusher; 15) Total number of evaluations; and 16) Cost of daily opiate habit.

It is well-known that factor analysis is an eminently useful approach to the problem of data reduction. A satisfactory solution to this problem was essential to the subsequent exploration of variables predictive of treatment success. Investigators planning future revisions of the data collection forms would do well to consider the results of the several program factor analyses in their selection of items to be retained or omitted.

d. Assessment of Client Success in Treatment. In accordance with the methodology described in Chapter V, the case numbers and name codes of all 168 clients having at least three evaluations were referred to program personnel together with instructions for rating degree of client success in treatment. Sixty-seven (40%) of these 168 clients were not rated by the program staff, presumably because the necessary information was unavailable.

Of the 101 clients for whom success ratings were made, 18 (18%) were considered unimproved or worse. Fourteen (14%) were considered slightly improved; 19 (19%) were considered moderately improved; 34 (34%) were considered markedly improved; and 16 (16%) were considered complete successes. On a five-point scale ranging from zero to four, the average degree of rated success was 2.2--a value ranging between moderate and marked improvement.

It should be noted that the basis for these ratings was not made explicit, and that their reliability and validity are open to question. Moreover, there is no way of determining

to what extent any improvement, or the lack of it, was a function of treatment efforts. Future attempts at rehabilitation would do well to incorporate a reliable and objective evaluation procedure as an integral part of program operation.

e. Prediction of Client Success in Treatment. For the New Jersey sample, 18 variables were entered into the correlation matrix along with the success ratings in an attempt to predict the latter. These were: Age, sex, race, type of admission, ethnic group membership, years of education, military service, total number of arrests, number of arrests for acts against persons, number of arrests for drug-related acts, longest period of time off drugs, number of times voluntarily attempted to stop using drugs, frequency of present non-opiate use, age of first non-opiate use, frequency of present opiate use, started by a "pusher," current use of alcohol, and parents living together until client age ten or beyond.

After deletion of six cases because of missing data with respect to one or more of the predictor variables used, 95 cases remained for analysis. Since this small number would not permit meaningful analysis by halves, the entire group was subjected to the step-wise regression procedure.

Perusal of the original correlation matrix revealed that none of the predictors correlated significantly with degree of success as rated. The highest correlation noted in this regard was with race (r=.16), whites showing a slight tendency toward higher success. A similar correlation (r=.16) was noted between the latter and sex. Neither of these correlations reaches significance at the .05 level.

The results of the step-wise multiple linear regression were likewise insignificant with respect to any combination of the 22 potential predictors. It must therefore be concluded that rated degree of success in the New Jersey program was uncorrelated with any client information recorded at the time of admission.

5. Program #5: New York City

a. Tabulation of Item Responses. The New York program submitted data on a total of 3566 clients, the majority of whom were male (80%), and non-white (53%). With respect to ethnic affiliation, 23% were Puerto Rican, 10% were Italian, and 28% were listed as "other". Race and sex differences in ethnic affiliation were also noted.

The average client remained in treatment 71 days and had between two and three evaluations (Form II's administered).

About half of the interviewers were themselves ex-addicts, and approximately 85% of all admissions were voluntary or voluntary-urged. Medical examinations on admission were performed in only about 3% of all cases. The average client was 23 years old at the time of entry, with whites being younger than non-whites, and white females being younger than white males. Eighty three per cent were U.S. urban born and nearly 10% were Puerto Rican born. Race differences with respect to religious preference were also noted, with whites being predominantly Catholic or Jewish.

With respect to educational and occupational background, between ten and eleven years of schooling was most typical, with white females having somewhat more. It is interesting to note that 42% had never worked as long as one month at any one job, and an additional 21% had worked less than six months in such a capacity. Most (87%) had never served in the U.S. armed forces; of those who did, 34% received less than an honorable discharge. The expected sex differences on these variables were, of course, much in evidence.

In contrast to the experience of some other programs, 26% of those on whom data were available had never been arrested, and the mean number of arrests was between three and four. Females were arrested fewer times and usually at a somewhat older age than were males, and white females were arrested fewer times than were non-white females.

The modal age of first arrest for the entire group was between 16 and 18 years. Most arrests appear to have been for drug-related acts. The longest uninterrupted time served in prison averaged more than 9 months, with non-whites serving longer than whites, and white males serving longer than white females.

Turning now to previous drug usage, the longest time off drugs since regular use began yielded an average of 9 months--a figure which correlates significantly with longest time spent in jail. More than 23% had never voluntarily tried to stop using drugs, and over 50% had had no prior treatment for drug addiction. Although marijuana and the opiates were used often, or almost daily, during the period of maximum use by over 50% of the clients, all other substances were used only occasionally or not at all by the typical addict treated. If all drugs are ranked according to average age at first use, the ranking, beginning with the earliest, is as follows: inhalants, marijuana, amphetamines, barbiturates, opiates, and psychedelics. Inhalants had an average age of first use of 14.5 years; the corresponding figure for psychedelics was 18.4 years. Sex differences were noted with respect to both present and maximum drug use.

The above findings concerning age at first use should not be interpreted to imply the existence of a natural sequence of drug experimentation. This might be true only if all clients had used all of the substances mentioned. On the contrary, over one-half had never used barbiturates, and a similar proportion had never used amphetamines. In addition, 81% had never used inhalants, and 75% had never used psychedelics. Only marijuana and/or the opiates had been used by 75% or more of the entire group.

In an effort to shed light on the issue of drug sequence, data from those 894 clients who had tried all four of the most frequently used substances across programs(marijuana, opiates, amphetamines, barbiturates) provided the basis for an additional analysis. For each of these 894 subjects, the four drugs mentioned were ranked for age of first use and the average rank for each drug was computed. The resulting mean rank order was as follows: marijuana, barbiturates, amphetamines, opiates. Kendall's coefficient of concordance ($\underline{W}$) computed on these data was .23, a value significant beyond the .01 level and suggesting that a typical sequence of usage does, in fact, exist. The mean rankings for amphetamines and barbiturates were practically interchangeable, however.

At least 59% of the entire group were taking drugs by vein at the time of admission. The average daily cost of habit was $12.16. The overwhelming majority (89%) were started by a drug user who was usually (86%) a friend of the same age or older. Less than 2% were started by pushers. Most (63%) started out of curiosity due to friends' influence.

With the exception of marijuana and the opiates, none of the previously mentioned substances was used by more than approximately 15% of the addicts at the time of admission. There is evidence, moreover, that opiate use declined significantly among those who remained in the program. Alcohol usage, for the most part, was described as "light-social" or not at all.

With respect to childhood home environment, the most noteworthy aspect is the fact that the father was absent most of the time in fully 39% of the total cases. Similarly, parents had been living together until client age ten in only 64% of the total cases. This situation was more typical of non-whites than of whites. Over 20% did not even know their father's primary or usual job.

The disrupted marital and familial situations frequently noted in the childhood home environment had their counterparts in the addicts' current living arrangements. At time of admission, only 10% were living with a spouse, and only 2%

were living with a non-relative of the opposite sex (not a spouse). The majority were either living alone, or with parents, in-laws, or other relatives. Over half were living with their parents, and less than 3% reported having "no stable arrangements" at the time of entry into the program. Seventy-one per cent had never married.

On the average, between three and four persons lived in the client's household. In 46% of the cases, a person under 18 years of age was also present. Fourteen per cent admitted drug usage by other persons living in the household, and approximately 8% had one or more persons living with them who were undergoing drug treatment.

With respect to finances, legal jobs were a source of income in only 12% of the cases at the time of admission. Illegal activities were admitted as a source of income by 28%. Other sources of income reported by more than one-fourth of the clients were family (48%) and public assistance (27%). Over 60% listed their occupation as unskilled and/or unemployed on admission; however, over 70% reported a level of training and/or experience in an occupation requiring some skill.

Turning now to miscellaneous items, the level of difficulty encountered in various problem areas, including skidding and hustling, seemed to improve somewhat with treatment. The same might be said of the clients' mood.

Program services were utilized fairly consistently by clients during their period of enrollment. Group meetings were attended by more than 80%, and from 30-40% attended individual meetings. From 15 to 20% of clients utilized the "family contact" service. Use of full residential care seemed to increase with length of stay in the program.

Urine chromatography tests were also performed, the number of clients tested rising from 20% to almost 60% by the fifth month of evaluation. However, no more than one per cent of the clients ever tested positive for opiates during any treatment month.

Full or partial-satisfactory use of program services was claimed for 60-90% of all clients. Similarly, reliability of recorded data was considered satisfactory in more than 50% of the cases on the first evaluation and increased thereafter. Attempts to verify the information obtained were made on 21% of the cases at admission and increased steadily.

b. Trend Analysis. Slightly less than 8% (276) of the 3566 clients reported had five or more consecutive monthly evaluations, and trend analyses were performed on this sub-group in an effort to evaluate client changes over time. The methodology

employed and the variables chosen were discussed in the preceding chapter; only an overview of the results will be presented here.

Number of days worked in the past four weeks dropped to zero in the month following admission and remained at about that level thereafter. The same was true of money earned, both individual and household. (It is worthy of note that a similar trend can be discerned from the successive monthly item tabulations. The latter, however, because of missing evaluations, do not follow the same subset of clients over time.)

As mentioned earlier, there was evidence for a striking decrease in opiate use over the five-month period. Changes in all four problem areas during this same period of time were significant. (This pattern can also be observed from the successive monthly item tabulations.) Unpleasant mood states exhibited significant decreases; however, "mood-elated" showed little change. The improvements in mood were similar in direction but greater in degree than those observed from the monthly item tabulations.

c. Correlation Matrices and Factor Analyses. As mentioned in the preceding chapter, 48 quantitative or dichotomous variables were selected from the two admission forms as being the most representative and meaningful of the total items available. Two additional variables were added: total number of Form II evaluations (thought to reflect client participation in treatment), and age of program at time of client entry (thought to reflect changes, over time, in program orientation or operation). The resulting 50 variables were intercorrelated for men and women separately, since it was felt that certain relationships might prove to be a function of sex. A principal components factor analysis was subsequently performed on each sex group separately.

As was expected, the majority of the 1,225 correlations obtained for each sex group were small and not statistically significant. Without exception, the few very high correlations obtained reflected logical dependencies, such as frequency of present use of opiates and mainlining, or earnings and number of days worked in the preceding month. On the other hand, there were a few correlations that were sizable in one group but insignificant in the other.

The interested and technically sophisticated reader would do well to examine the actual correlation matrices accompanying this report. By so doing, confirmation or denial of a number of interesting hypotheses, at least for these samples, might well be afforded.

As mentioned above, a principal components factor analysis was carried out on both the male and the female samples. Most of the variables in the original correlation matrix were based on approximately 2860 cases in the male group, and on approximately 700 cases in the female group.

From the 50 X 50 matrix, 24 principal components having eigenvalues in excess of 0.8 were extracted in the male sample and 23 in the female. Sixteen had eigenvalues greater than 1.00 in both samples and were retained for subsequent orthogonal rotation by the objective varimax procedure. In the male sample, these 16 factors accounted for 60.5% of the total variance contained in the original 50 variables. For the female sample, the variance accounted for was 63.8%. Identification and labelling of rotated factors were accomplished through inspection of the factor loadings, i.e., factors were labelled in accordance with the size and exclusiveness of factor-variable correlations. Identification was also facilitated by means of cross-program comparisons (cross-validation of factor structure).

The sixteen factors retained were listed in the order of their appearance following varimax rotation. In the male sample, they have been tentatively labelled as follows: 1) Total number of arrests; 2) Current problem areas in adjustment; 3) Number of days worked in the last four weeks; 4) Age at first drug use; 5) Frequency of present opiate use; 6) Total number of evaluations; 7) Race; 8) Number of persons living in household; 9) Socio-economic status; 10) Frequency of present non-opiate use; 11) Mood; 12) Number of arrests for sexual acts; 13) Number of times voluntarily attempted to stop drug use; 14) Parents living together until client age ten; 15) Ex-addict interviewer; and 16) Type of admission.

Factors derived from the female sample were given the following tentative labels: 1) Total number of arrests; 2) Frequency of present opiate use; 3) Number of days worked during past four weeks; 4) Age at first drug use; 5) Current problem areas in adjustment; 6) Total number of evaluations; 7) Socio-economic status; 8) Number of persons in household; 9) Frequency of present non-opiate use; 10) Number of times voluntarily attempted to stop drug use; 11) Race; 12) Ex-addict interviewer; 13) Military service; 14) Started by a "pusher;" 15) Mood; and, 16) Type of admission.

Of the 16 factors having eigenvalues greater than 1.00, 14 appeared in both samples. Military service and started by a "pusher" occurred as factors in the female sample only and accounted for 4.9% of the total variance. Parents living together until client age ten and number of arrests for sexual acts occurred as factors in the male sample only and accounted for 5.2% of the total variance. Since 14 of the 16 factors were present in both samples and emerged in approximately

the same sequence, it would appear that sex did not have a major bearing on the latent structure underlying covariation among the variables.

It is well-known that factor analysis is an eminently useful approach to the problem of data reduction. A satisfactory solution to this problem was essential to the subsequent exploration of variables predictive of treatment success. Investigators planning future revisions of the data collection forms would do well to consider the results of the several program factor analyses in their selection of items to be retained or omitted.

d. Assessment of Client Success in Treatment. In accordance with the methodology described in Chapter V, the case numbers and name codes of all 528 clients having at least three evaluations were referred to program personnel together with instructions for rating degree of client success in treatment. Of these 528 clients, 224 (42%) were not rated by the program staff, presumably because the necessary information was unavailable.

Of the 304 clients for whom success ratings were made, none was considered unimproved or worse. One (0.3%) was considered slightly improved; 48 (16%) were considered moderately improved; 207 (68%) were considered markedly improved; and 48 (16%) were considered complete successes. On a five-point scale ranging from zero to four, the average degree of rated success was 3.0--a value denoting marked improvement.

It should be noted that the basis for these ratings was not made explicit, and that their reliability and validity are open to question. Moreover, there is no way of determining to what extent any improvement, or the lack of it, was a function of treatment efforts. Future attempts at rehabilitation would do well to incorporate a reliable and objective evaluation procedure as an integral part of program operation.

e. Prediction of Client Success in Treatment. For the New York sample, 21 variables were entered into the correlation matrix along with the success ratings in an attempt to predict the latter. These were: Age, sex, race, marital status, type of admission, ethnic group membership, years of education, military service, total number of arrests, number of arrests for acts against persons, number of arrests for drug-related acts, longest period of time off drugs, number of times voluntarily attempted to stop using drugs, frequency of present non-opiate use, age of first non-opiate use, frequency of present opiate use, started by a "pusher", current use of alcohol, parents living together until client age ten or beyond,

current income from welfare, and number of days worked in the previous four weeks.

After deletion of 25 cases because of missing data with respect to one or more of the predictor variables used, 279 cases remained for analysis. In an effort to cross-validate any predictors that might emerge, the sample was randomly divided into two equal halves, and correlation matrices and step-wise multiple linear regressions were computed on each half separately as well as on the total group.

In one half of the sample, the only significant correlation with rated degree of success was number of times voluntarily tried to stop using drugs (r=.17); in the other half, significant correlations were found between the criterion and income from welfare (r=.18) and number of arrests for acts against persons (r=-.18).

For the entire sample, only two of the 21 potential predictors correlated significantly with degree of success as rated: income from welfare (r=.16) and age of first use of non-opiates (r=.12). This finding suggests the tendency for persons having higher income from welfare and older age at first non-opiate use to have higher ratings of success as well. These relationships, however, are quite small.

For both samples combined, the degree of prediction of rated success reached an asymtote with the inclusion of the following five predictors (listed in order of entry into the step-wise multiple regression equation): income from welfare, number of times voluntarily attempted to stop using drugs, arrests for acts against persons, years of education, and age at first non-opiate use. At that point, the multiple R was .26, and the percentage of criterion variance accounted for (R^2) was 6.5%. The associated F-ratio was 3.83, which with 5 and 273 degrees of freedom is nominally significant beyond the .01 level.

The only variable emerging as a significant predictor in both halves of the total sample was income from welfare.

The above results should be considered tentative and subject to confirmation through future research. The five variables found to have prognostic value in this study could form the basis for further predictive efforts in this particular geographic area.

6. Program #7: San Antonio, Texas

a. Tabulation of Item Responses. The San Antonio program submitted data on a total of 352 clients, the overwhelming majority of whom were male (82%), Caucasian (85%), and of Mexican ethnic affiliation (79%). Non-white admissions increased in the last few months of the program's operation.

The average client remained in treatment 242 days and had between five and six evaluations (Form II's administered). Less than 1% of the admitting interviewers were ex-addicts themselves, and 74% of all admissions were voluntary. Medical examinations were performed in approximately 18% of the total cases. The average client was 28 years old at the time of entry, with males being three to four years older than females. Over 90% were U.S. urban born. Given the preceding information concerning ethnic origin, it is not surprising that 87% were Catholic--60% of the non-whites and 92% of the whites.

With respect to educational and occupational background, between eight and nine years of schooling was most typical, with non-whites having somewhat more. Almost 23% of the clients had never worked as long as one month at any one job, and an additional 19% had never worked more than six months in such capacity. The average longest time worked at one job was about 26 months, although white females averaged less than 11 months on this variable. Most (73%) had never served in the U.S. armed forces: of those who did, 42% received less than an honorable discharge. The expected sex differences on these variables were, of course, much in evidence.

Only about 5% of those on whom data were available had never been arrested, and the mean number of arrests was almost thirteen. The modal age of first arrest for the entire group was between 16 and 18 years, with males being younger than females. Most arrests appear to have been for vagrancy or "other crimes." The longest uninterrupted time served in prison averaged 16 months, with males serving longer than females.

Turning now to previous drug usage, the longest time off drugs since regular use began yielded an average of 17 months--a figure which correlates significantly with longest time spent in jail. Almost 22% had never voluntarily tried to stop using drugs, and over 65% had had no prior treatment for drug addiction. Although the opiates were used almost daily during the period of maximum drug use, all other substances, except marijuana, were used only occasionally, or not at all, by the typical addict treated. Marijuana had been used often, or almost daily, by 43% of the clients. If all

drugs are ranked according to average age at first use, the ranking, beginning with the earliest, is as follows: inhalants, marijuana, barbiturates, psychedelics, opiates, and amphetamines. Inhalants had an average age of first use of 15.2 years: the corresponding figure for amphetamines was 19.8 years.

The above findings with respect to age at first use should not be interpreted to imply the existence of a natural sequence of drug experimentation. This might be true only if all clients had used all of the substances mentioned. On the contrary, over half had never use barbiturates, and a greater proportion had never used amphetamines. In addition, 80% had never used inhalants, and 96% had never used psychedelics. Only two drugs, marijuana and the opiates, had been used by 80% or more of the entire group.

In an effort to shed light on the issue of drug sequence, data from those 88 clients who had tried all four of the most frequently used substances across programs (marijuana, opiates, amphetamines, barbiturates) provided the basis for an additional analysis. For each of these 88 subjects, the four drugs mentioned were ranked for age of first use and the average rank for each drug was computed. The resulting mean rank order was as follows: marijuana, amphetamines, barbiturates, opiates. Kendall's coefficient of concordance (W) computed on these data was .21, a value significant beyond the .01 level and suggesting that a typical sequence of usage does, in fact, exist.

At least 86% of the entire group were taking drugs by vein at the time of admission. The average daily cost of habit was $22.69. The overwhelming majority (91%) for whom data were available were started by a drug user who was usually (80%) a friend of the same age or older. Most (53%) started out of curiosity due to friends' influence, or for kicks (23%).

None of the previously mentioned substances except opiates was being used by more than approximately 15% of the addicts at the time of admission. Alcohol usage, for the most part, was described as "light-social." However, it was considered a problem in 19 to 32% of the cases at various points in time.

With respect to childhood home environment, the most noteworthy aspect is the fact that for those on whom data were available, the father was absent from the home most of the time in almost 65% of the white females and over 35% of all clients. Parents had been living together until client age ten in only 64% of the cases for whom information was available, and 11% did not know their father's primary or

usual job. (NOTE: The high incidence of "Information Not Available" responses to several items reflects early usage of a preliminary version of the data collection forms in which these items were not included.)

With respect to current living arrangements, the majority were either living with a spouse, or with parents, in-laws, or other relatives. Only 4% were living alone, and practically none were living with a non-relative of the opposite sex (not a spouse). Only 21% had never married.

On the average, between four and five persons lived in the clients' household. In 72% of the cases on whom data were available a person under 18 years of age was also present. Twelve per cent were living with others using drugs, and approximately 9% had one or more persons living with them who were also undergoing drug treatment.

With respect to finances, legal jobs were not a source of income in 70% of the cases at the time of admission. Illegal activities were cited as a source of income by 54%, and family and/or friends were cited as sources by more than 25%. Almost 79% for those on whom data were available had training or experience in skilled manual occupations or higher. Aspirations were generally on the same level, or one step beyond.

Turning now to miscellaneous items, the degree of difficulty encountered in three of the several problem areas listed increased during treatment: difficulty adhering to treatment, getting along with people, and use of alcoholic beverages. Other problem areas typically showed a sharp decrease from evaluation 1 to evaluation 2, with relative stability thereafter. Mood ratings were rather stable throughout.

The three most frequently used program services by those for whom data were available were: individual meetings (70%), family contacts (60%), and group meetings (36%). Similarly, urine chromatography tests were performed on 15 to 30% of the clients. Full or partial satisfactory use of program services was claimed in 28 to 47% of the total cases at various points in time.

Finally, reliability of recorded data was considered satisfactory in 67 to 95% of the total cases depending upon the evaluation period. Attempts to verify the information obtained were made about 60% of the time. Clients were interviewed almost exclusively by staff who were not themselves ex-addicts.

b. Trend Analysis. Although only 57 of the 352 clients admitted had five or more consecutive monthly evaluations,

trend analyses were performed on this sub-group in an effort to evaluate client changes over time. The methodology employed and the variables chosen were discussed in the preceding chapter; only an overview of the results will be presented here.

Number of days worked and money earned by the individual increased over the five-month period; however, the amounts recorded for both during the month following admission were unexpectedly low.

Turning to treatment response, there was evidence of a linear decrease in opiate use over the five-month period. Changes in problem areas during this same period of time were irregular but sometimes significant. Difficulty in adhering to treatment and alcohol usage became greater problems, whereas obeying the law became less of a problem. In general, mood exhibited little change with the exception of "mood-suspicious" which showed a significant increase. Unfortunately, the n's involved in the mood and problem area analyses were further reduced by frequently missing data on these particular items.

c. Correlation Matrices and Factor Analysis. As mentioned in the preceding chapter, 48 quantitative or dichotomous variables were selected from the two admission forms as being the most representative and meaningful of the total items available. Two additional variables were added: total number of Form II evaluations (thought to reflect client participation in treatment), and age of program at time of client entry (thought to reflect changes, over time, in program orientation or operation). The resulting 50 variables were intercorrelated for men and women separately, since it was felt that certain relationships might prove to be a function of sex. A principal components factor analysis was subsequently performed on the male data only, since data on fewer than 70 females were available for analysis.

As was expected, the overwhelming majority of the 1,225 correlations obtained for each sex group were small and not statistically significant. With few exceptions, the few very high correlations obtained reflected logical dependencies, such as frequency of present use of opiates and mainlining, or earnings and number of days worked in the preceding month. On the other hand, there were a few correlations that were sizable in the female group but rather low in the male, and vice-versa. An example of such was type of admission and associating with bad company (Females: $r=.64$; Males: $r=.18$).

The interested and technically sophisticated reader would do well to examine the actual correlation matrices

accompanying this report. By so doing, confirmation or denial of a number of interesting hypotheses, at least for these samples, might well be afforded.

As mentioned above, a principal components factor analysis was carried out on the male sample only. Most of the variables in the original correlation matrix were based on approximately 280 cases; for relationships involving mood, the n's dropped to less than 60% of that number.

From the 50 X 50 matrix, 24 principal components having eigenvalues in excess of 0.8 were extracted. Eighteen had eigenvalues greater than 1.00 and were retained for subsequent orthogonal rotation by the objective varimax procedure. These 18 factors accounted for 69.7% of the total variance contained in the original 50 variables. Identification and labelling of rotated factors were accomplished through inspection of the factor loadings, i.e., factors were labelled in accordance with the size and exclusiveness of factor-variable correlations. Identification was also facilitated by means of cross-program comparisons (cross-validation of factor structure).

The eighteen factors retained were listed in the order of their appearance following varimax rotation. They have been tentatively labelled as follows: 1) Frequency of present opiate use; 2) Number of days worked during past four weeks; 3) Total number of arrests; 4) Age at first drug use; 5) Ethnic group membership; 6) Total number of evaluations; 7) Present use of non-opiates; 8) Number of persons in household using drugs; 9) Marital status; 10) Maximum previous use of opiates; 11) Income from welfare; 12) Parents living together until client age ten; 13) Ex-addict interviewer; 14) Started by "pusher;" 15) Mood; 16) Socio-economic status; 17) Number of arrests for sexual acts; and 18) Present use of alcohol.

It is well-known that factor analysis is an eminently useful approach to the problem of data reduction. A satisfactory solution to this problem was essential to the subsequent exploration of variables predictive of treatment success. Investigators planning future revisions of the data collection forms would do well to consider the results of the several program factor analyses in their selection of items to be retained or omitted.

d. Assessment of Client Success in Treatment. In accordance with the methodology described in Chapter V, the case numbers and name codes of all 175 clients having at least three active evaluations were referred to program personnel together with instructions for rating degree of client success in treatment. Five (3%) of these 175 clients were not rated by

the program staff, presumably because the necessary information was unavailable.

Of the 170 clients for whom success ratings were made, 55 (32%) were considered unimproved or worse. Forty-seven (28%) were considered slightly improved; 40 (24%) were considered moderately improved; 19 (11%) were considered markedly improved; and 9 (5%) were considered complete successes. On a five-point scale ranging from zero to four, the average degree of rated success was 1.3--a value ranging between slight and moderate.

It should be noted that the basis for these ratings was not made explicit, and that their reliability and validity are open to question. Moreover, there is no way of determining to what extent any improvement, or the lack of it, was a function of treatment efforts. Future attempts at rehabilitation would do well to incorporate a reliable and objective evaluation procedure as an integral part of program operation.

e. Prediction of Client Success in Treatment. For the San Antonio sample, 20 variables were entered into the correlation matrix along with the success ratings in an attempt to predict the latter. These were: Age, sex, race, marital status, type of admission, ethnic group membership, years of education, military service, total number of arrests, number of arrests for acts against persons, number of arrests for drug-related acts, longest period of time off drugs, number of times voluntarily attempted to stop using drugs, frequency of present non-opiate use, age of first non-opiate use, frequency of present opiate use, current use of alcohol, current income from welfare, number of days worked in the previous four weeks, and cost of current drug habit.

After deletion of 13 cases because of missing data with respect to one or more of the predictor variables used, 157 cases remained for analysis. In an effort to cross-validate any predictors that might emerge, the sample was randomly divided into two equal halves, and correlation matrices and step-wise multiple linear regressions were computed on each half separately as well as on the total sample.

In one half of the sample, three significant correlations with rated degree of success were found. These were: military service (r=-.31), cost of current drug habit (r=-.24), and total number of arrests (r=-.23). In the other half, no significant correlations with degree of rated success were found.

For the entire sample, three of the 20 potential predictors correlated significantly with degree of success as rated: cost of current drug habit (r=-.18), total number of arrests (r=.18), and military service (r=-.16). This finding suggests the tendency for persons with lower-cost habits, fewer total arrests, and no military service to have higher degrees of success as rated. These relationships, however, are quite small.

For both samples combined, the degree of prediction of rated success reached an asymtote with the inclusion of the following five predictors (listed in order of entry into the step-wise multiple regression equation): cost of current drug habit, total number of arrests, arrests for acts against persons, income from welfare, and military service. At that point, the multiple R was .33, and the percentage of criterion variance accounted for (R^2) was 11%. The associated F-ratio was 3.72 which with 5 and 151 degrees of freedom is nominally significant beyond the .01 level.

The only variable emerging as a significant predictor in both halves of the total sample was total number of arrests.

The above results should be considered tentative and subject to confirmation through future research. The five variables found to have prognostic value in this study could form the basis for further predictive efforts in this particular geographic area.

7. Program # 8: Tacoma-Pierce County, Washington

a. Tabulation of Item Responses. The Tacoma program submitted data on a total of 256 clients, the majority of whom were male (73%) and Caucasian (82%), with no particular ethnic affiliations noted.

The average client remained in treatment 103 days and had between three and four evaluations (Form II's administered). Only 17% of the admitting interviewers were ex-addicts themselves, and over 69% of all admissions were voluntary or voluntary-urged. Medical examinations on admission were not performed. The average client was 26 years old at the time of entry, with non-whites being older than whites. Over 87% were U.S. urban born.

With respect to educational and occupational background, the average client had over eleven years of schooling, with white males having somewhat more than white females. It is interesting to note that 40% had never worked as long as one month at any one job, and an additional 20% had worked less than six months in such a capacity. Most (74%) had never

served in the U.S. armed forces; of those who did, 42% received less than an honorable discharge. The expected sex differences on these variables were, of course, much in evidence.

Only 13% of those on whom data were available had never been arrested, and the mean number of arrests was between six and seven. White females were arrested fewer times and usually at a somewhat older age than their male counterparts. The modal age of first arrest for the entire group was between 16 and 18 years. Most arrests appear to have been for drug-related acts and acts against property. The longest uninterrupted time served in prison averaged between 7 and 8 months, with non-white males serving longer than white males, and males serving longer than females.

Turning now to previous drug usage, the longest time off drugs since regular use began yielded an average of seven months--a figure which correlates with longest time spent in jail. More than 20% had never voluntarily tried to stop using drugs, and over 70% had had no prior treatment for drug addiction. Between 50 and 75% used the opiates, marijuana, or amphetamines often or almost daily during the period of maximum drug use.

If all drugs are ranked according to average age at first use, the ranking, beginning with the earliest, is as follows: inhalants, marijuana, amphetamines, psychedelics, barbiturates, and opiates. Inhalants had an average age of first use of 16.0 years; the corresponding figure for opiates was 20.1 years.

The above findings with respect to age at first use should not be interpreted to imply the existence of a natural sequence of drug experimentation. This might be true only if all clients had used all of the substances mentioned. However, 90% had used marijuana, 85% had used opiates, and over 60% had used psychedelics. Only inhalants had not been used by a majority of the clients.

In an effort to shed light on the issue of drug sequence, data from those 135 clients who had tried all four of the most frequently used substances across programs (marijuana, opiates, amphetamines, barbiturates) provided the basis for an additional analysis. For each of these 135 subjects, the four drugs mentioned were ranked for age of first use and the average rank for each drug was computed. The resulting mean rank order was as follows: marijuana, amphetamines, barbiturates, opiates. Kendall's coefficient of concordance ($\underline{W}$) computed on these data was .23, a value significant beyond the .01 level and suggesting that a typical sequence of usage does, in fact, exist.

At least 60% of the entire group were taking drugs by vein at the time of admission. The average daily cost of habit was $40.29. The overwhelming majority (81%) were started by a drug user who was usually (78%) a friend of the same age or older. Less than 4% were started by pushers. Over 60% started out of curiosity due to friends' influence, and over 16% started using drugs for kicks. Only the opiates were being used often or almost daily by more than 20% of the addicts at the time of admission. There is evidence that opiate use decreased sharply by the time of the 2nd evaluation and remained stable thereafter. Alcohol usage, for the most part, was described as "light-social" or not at all. However, it was considered a problem in 5 to 15% of the cases at various points in time.

With respect to childhood home environment, the most noteworthy aspect is the fact that the father was absent most of the time in 36% of the total cases. This situation was more typical of non-white males than of white males. Similarly, parents had been living together until client age ten in only 59% of the total cases. Only 5% did not know their father's primary or usual job.

The disrupted marital and familial situations frequently noted in the childhood home environment had their counterparts in the addicts' current living arrangements. On admission, only 16% were living with a spouse, and very few (4%) were living with a non-relative of the opposite sex (not a spouse). The majority were either living alone, or with parents, in-laws, or friends. Forty-nine per cent had never married.

On the average, between two and three persons lived in the client's household, with non-white males tending toward fewer. In 37% of the cases, a person under 18 years of age was also present. Admitted drug usage by these other family members was rare. Approximately 6% of the clients had one or more persons living with them who were also undergoing drug treatment.

With respect to finances, legal jobs were claimed as a source of income by 28% of the clients at the time of admission. Illegal activities were claimed as a source of income by 35%. Almost 75% were supported, in part, by the family. None of the remaining alternative sources of income was claimed by more than 15% of the clients.

Although 46% of the clients were unskilled or unemployed at the time of admission, almost 80% had a higher level of training and/or experience.

Turning now to miscellaneous items, the level of difficulty encountered in various problem areas, including skidding

and hustling, seemed to remain rather stable or to improve slightly with treatment. The same might be said of the clients' mood.

Program services consisting of full residential care and group and individual meetings were utilized by the majority of the addicts enrolled. Other program services were used by less than 40% at any treatment period. Urine chromatography tests were performed on 27% of the clients prior to the 2nd evaluation. This number increased to 55% prior to the 5th evaluation. Full or partial satisfactory use of program services was claimed for 43 to 65% of all clients.

Finally, reliability of recorded data was considered satisfactory in about half of the total cases, and attempts to verify the information obtained were made in roughly 45%.

b. Trend Analysis. Although slightly less than 10% of the 256 clients admitted had five or more consecutive monthly evaluations, trend analyses were performed on this sub-group in an effort to evaluate client changes over time. The methodology employed and the variables chosen were discussed in the preceding chapter; only an overview of the results will be presented here.

Neither number of days worked in the past four weeks nor individual income showed a significant linear increase over the five evaluation points. However, household income displayed a curvilinear trend over time, decreasing sharply at the 2nd and 3rd evaluation points and rising once more by the 5th. (It is interesting to note that on the successive monthly item tabulations, household income declined steadily.)

As mentioned earlier, there is evidence for a significant linear decrease in opiate use over the five-month period. Changes in problem areas during this period of time were mixed. Both "adhering to treatment" and "use of alcohol" showed minimal changes; "obeying the law" exhibited a significant linear improvement; while "constructive use of free time" revealed a curvilinear trend.

Mood exhibited little change with the exception of "mood-anxious" and "mood-depressed", which showed significant decreases. The small n's involved in all of these analyses should be emphasized.

c. Correlation Matrices and Factor Analysis. As mentioned in the preceding chapter, 48 quantitative or dichotomous variables were selected from the two admission forms as being the most representative and meaningful of the total items available. Two additional variables were added: total number of Form II evaluations (thought to reflect client participation in treatment), and age of program at time of client

entry (thought to reflect changes, over time, in program orientation or operation). The resulting 50 variables were intercorrelated for men and women separately, since it was felt that certain relationships might prove to be a function of sex. Subsequent factor analyses were not performed, since data were not available on a sufficient number of clients.

As was expected, the overwhelming majority of the 1,225 correlations obtained for each sex group were small and not statistically significant. Most of the very high correlations obtained reflected logical dependencies, such as frequency of present use of opiates and mainlining, or earnings and number of days worked in the preceding month. On the other hand, there were a few correlations that were sizable in one group but insignificant in the other. Two such examples are: 1) time in jail and number of arrests for sexual acts (female: r=.73; male: r=.08); and 2) times treated for drug addiction and number of arrests for drug related acts (male: r=.53; female: r=-.03).

The interested and technically sophisticated reader would do well to examine the actual correlation matrices accompanying this report. By so doing, confirmation or denial of a number of interesting hypotheses, at least for these samples, might well be afforded.

d. Assessment of Client Success in Treatment. In accordance with the methodology described in Chapter V, the case numbers and name codes of all 73 clients having at least three active evaluations were referred to program personnel together with instructions for rating degree of client success in treatment. Three (4%) of these 73 clients were not rated by the program staff, presumably because the necessary information was unavailable.

Of the 70 clients for whom success ratings were made, 15 (21%) were considered unimproved or worse. Twenty-seven (38%) were considered slightly improved; 14 (20%) were considered moderately improved; 6 (9%) were considered markedly improved; and 8 (11%) were considered complete successes. On a five-point scale ranging from zero to four, the average degree of rated success was 1.5--a value ranging between slight and moderate improvement.

It should be noted that the basis for these ratings was not made explicit, and that their reliability and validity are open to question. Moreover, there is no way of determining to what extent any improvement, or the lack of it, was a function of treatment efforts. Future attempts at rehabilitation would do well to incorporate a reliable and objective evaluation procedure as an integral part of program operation.

e. Prediction of Client Success in Treatment. For the Tacoma-Pierce County sample, 22 variables were entered into the correlation matrix along with the success ratings in an attempt to predict the latter. These were: Age, sex, race, marital status, type of admission, ethnic group membership, years of education, military service, total number of arrests, number of arrests for acts against persons, number of arrests for drug-related acts, longest period of time off drugs, number of times voluntarily attempted to stop using drugs, frequency of present non-opiate use, age of first non-opiate use, frequency of present opiate use, started by a "pusher," current use of alcohol, parents living together until client age ten or beyond, current income from welfare, number of days worked in the previous four weeks, and cost of current drug habit.

After deletion of seven cases because of missing data with respect to one or more of the predictor variables used, 63 cases remained for analysis. Since this small number would not permit meaningful analysis by halves, the entire group was subjected to the step-wise regression procedure.

Perusal of the original correlation matrix revealed that two of the predictors correlated significantly with degree of success as rated. These were sex (r=.30) and number of days worked during the past four weeks (r=-.27). These figures indicate that females were rated as showing more improvement than males, and that number of days worked in the four weeks prior to admission was negatively correlated with success. These relationships were quite small, however.

The results of the step-wise multiple linear regression must be interpreted with extreme caution because of the small number of cases, the relatively large number of potential predictors, and the consequent likelihood of capitalization upon chance relationships.

The degree of prediction of rated success reached an asymtote with the inclusion of the following ten predictors (listed in order of entry into the step-wise multiple regression equation): sex, years of education, present use of opiates, number of days worked during past four weeks, number of arrests for acts against persons, total number of arrests, parents living together until client age ten or beyond, income from welfare, military service, and age of first non-opiate use. At that point, the multiple R was .65, and the percentage of criterion variance accounted for (R^2) was 42.5%. The associated F-ratio was 3.85, which with 10 and 52 degrees of freedom is nominally significant beyond the .01 level.

The above results should be considered tentative and subject to confirmation through future research. The ten variables found to have prognostic value in this study could form the basis for further predictive efforts in this particular geographical area.

C. Cross-Program Comparison

Although there has never been any intent to compare the several programs with respect to either goals or effectiveness, it may nonetheless be of interest to have available a table summarizing client characteristics across programs. For this reason, Table VI-1 has been prepared. No information is contained in this table that has not already been alluded to in the preceding summarizations, and all data presented are more comprehensively dealt with in the Statistical Appendices. With the exception of the final item listed (percent of clients showing moderate or greater improvement), all information given in the table was obtained at the time of client admission.

An additional means of cross-program comparison is afforded with reference to the factor-analytic results. Table VI-2 lists the common factors identified in each of the several analyses as well as their order of emergence following varimax rotation. (It will be noted that factor analyses were performed for both males and females in the New York program, whereas no such analyses were performed for the Tacoma program because of the small number of cases available.) The fact that a large number of similar factors emerged across programs suggests the existence of similar patterns of covariation among the variables recorded.

TABLE VI-1

CROSS-PROGRAM COMPARISON OF CLIENT CHARACTERISTICS
AT TIME OF ADMISSION

FORM AND ITEM #	ITEM CONTENT	LOS ANGELES	WASH. D.C.	CHICAGO	NEW JERSEY	NEW YORK	SAN ANTONIO	TACOMA
	# of clients on whom data are available	321	734	348	995	3566	358	256
I-10	% voluntary admissions	90.0	55.4	89.4	63.9	62.8	73.9	59.8
I-11	average age on admission to program	30.3	27.0	32.3	25.2	23.2	28.5	
I-12B	% U.S. urban born	92.8	93.2	77.0	89.6	83.0	90.6	87.1
I-13	% male	86.3	77.2	77.8	83.7	80.4	81.8	72.6
I-14	% Caucasian	94.1	11.3	21.0	38.5	47.2	84.9	81.6
I-15	% without ethnic affiliation	11.2	97.5	64.4	45.1	38.4	10.5	89.1
I-16A	% Protestant	8.1	52.3	43.7	35.3	26.6	11.1	41.8
I-17	average grade completed in school	10.1	10.4	10.7	10.2	10.6	8.4	11.3
I-18	% served in U.S. armed forces	21.2	17.1	30.4	19.1	12.8	26.4	

TABLE VI-1 (CONTINUED)

FORM AND ITEM #	ITEM CONTENT	LOS ANGELES	WASH. D.C.	CHICAGO	NEW JERSEY	NEW YORK	SAN ANTONIO	TACOMA
I-19	% working 6-months or less at any one job	54.2	50.2	39.4	53.3	63.7	42.0	60.5
I-21A	% unskilled/ unemployed	32.1	33.7	26.1	30.2	23.8	29.5	24.2
I-22A	average number of times arrested	11.2	4.9	11.1	5.4	3.7	12.9	6.8
	average age at first arrest	15.7	18.6	18.6	17.5	17.7	17.3	16.7
I-23	average longest uninterrupted time served in prison (in months)	30.3	17.3	24.9	11.6	9.6	16.1	7.9
I-24	average longest time off drugs since regular use began (in months)	35.3	13.5	28.9	12.0	9.0	16.7	7.3
I-28	average age at first drug use	15.0	18.2	16.4	16.1	15.7	17.3	17.4
I-29	% taking drugs by vein on admission	N/A	68.0	30.7	79.6	59.1	86.6	60.9

TABLE VI-1 (CONTINUED)

FORM AND ITEM #	ITEM CONTENT	LOS ANGELES	WASH. D.C.	CHICAGO	NEW JERSEY	NEW YORK	SAN ANTONIO	TACOMA
I-30A	% started on drugs by friends same age or older	86.3	86.5	74.5	87.1	86.2	79.6*	78.2
I-34	% having parents living together until client age 10 or beyond	54.5	52.6	51.1	64.7	64.3	64.1*	58.6
II-11A	% living with spouse	15.0	18.8	24.7	12.8	10.6	38.2	16.1
II-12	% never married	44.9	51.3	27.0	56.0	71.0	20.8	
II-13	average number of persons living in clients' household	3.8	4.1	2.7	3.6	3.3	5.0	2.5
II-14	% having persons under 18 yrs. of age living in household	43.0	44.1	29.3	43.8	45.7	62.3*	36.5
II-17	% engaging in illegal activities	N/A	28.8	59.2	21.7	28.3	54.5	35.7
II-19A	% unemployed-no desire to look for job	N/A	21.7	14.9	15.1	9.7	19.1	14.1

TABLE VI-1 (CONTINUED)

FORM AND ITEM #	ITEM CONTENT	LOS ANGELES	WASH. D.C.	CHICAGO	NEW JERSEY	NEW YORK	SAN ANTONIO	TACOMA
II-19B	average number of days worked during past four (4) weeks	3.4	5.9	4.1	4.4	2.6	5.2	3.9
II-19D	average earnings during past four (4) weeks (in dollars)	63.75	112.13	80.54	86.40	42.50	55.36	87.60
II-21	average number of days in jail during past four (4) weeks	6.4	3.1	1.5	3.6	1.4	1.7	3.7
II-24	approximate average cost of habit per day (in dollars)	N/A	64.26	42.49	25.92	12.16	22.69	40.29
II-29	% of clients considered addicted to heroin	N/A	44.2	72.1	43.6	35.2	85.3*	35.7
	% of clients showning moderate or greater improvement	56.0 (N=102)	30.0 (N=70)	25.5 (N=132)	41.0 (N=101)	99.7 (N=304)	40.0 (N=170)	38.4 (N=70)

N/A - Not applicable because of special requirements for admission.

* Percentages based on a reduced number of cases for whom information was available.

TABLE VI-2

CROSS-PROGRAM COMPARISON OF FACTOR-ANALYTIC RESULTS

FACTOR IDENTIFIED	PROGRAM						
	L.A.	D.C.	CHI.	N.J.	N.Y. M	N.Y. F	S.A.
Frequency of present opiate use	1*	1	3	2	5	2	1
Longest time off drugs since regular use began	2	10	2	5	-	-	-
Number of days worked during past 4 weeks	3	3	1	3	3	3	2
Total number of arrests	4	4	5	6	1	1	3
Age at first drug use	5	2	6	1	4	4	4
Total number of evaluations	6	-	-	15	6	6	6
Number of times voluntarily attempted to stop drug use	7	9	-	13	13	10	-
Race	8	13	14	4	7	11	-
Current problem areas in adjustment	9	-	-	12	2	5	-
Income from welfare	10	12	10	-	-	-	11
Socio-economic status	11	5	7	11	9	7	16
Type of admission	12	-	-	10	16	16	-
Number of arrests for acts against persons	13	-	-	-	-	-	-
Number of persons living in household	14	8	15	8	8	8	-
Number in household using drugs	15	14	9	-	-	-	8
Present use of alcohol	16	-	-	-	-	-	18
Military service	17	-	8	-	-	13	-
Number of arrests for sexual acts	18	-	16	-	12	-	17

TABLE VI-2 (CONTINUED)

FACTOR IDENTIFIED	PROGRAM						
	L.A.	D.C.	CHI.	N.J.	N.Y. M	N.Y. F	S.A.
Mood	-	6	4	7	11	15	15
Daily cost of opiate habit	-	7	-	16	-	-	-
Ex-addict interviewer	-	11	18	-	15	12	13
Started by a "pusher"	-	15	11	14	-	14	14
Parents living together until client age 10	-	16	-	-	14	-	12
Ethnic group affiliation	-	17	-	-	-	-	5
Frequency of present non-opiate use	-	18	-	9	10	9	7
Marital status	-	-	13	-	-	-	9
Maximum previous opiate use	-	-	-	-	-	-	10
Total household income	-	-	12	-	-	-	-
Number of arrests for drug-related acts	-	-	17	-	-	-	-
% of total variance accounted for	69.8	68.2	71.4	63.6	60.5	63.8	69.7

* Numbers in body of table refer to order of factor emergence following rotation.

VII. SUGGESTIONS FOR FUTURE RESEARCH

The Office of Economic Opportunity is to be commended for its persistent efforts to bring about both an accurate description of the problems encountered and a meaningful evaluation of the impact achieved by the seven funded programs during a two-year period of operation. The difficulties surrounding this task have been many; they have been partially documented in earlier chapters of this report.

At the time this study was initially undertaken, there were few investigative precedents to serve as guidelines for the project staff. Standard approaches to experimental design and data collection were considered inappropriate or unfeasible; research efforts frequently met with suspicion from clients and counselors alike; an entire system for processing and analyzing incoming data had to be devised and made operational; and the time available to deal with all of these issues was distressingly short. In retrospect, it is somewhat surprising that the project succeeded as well as it did.

It would be unfortunate if the experiences gained and the lessons learned during the course of this investigation were to be disregarded in the planning of future, similar projects. Many of these experiences have already been described, as have tentative solutions to various problems encountered. Consequently, several implicit recommendations have already been made.

The purpose of the present chapter is to present, in brief form, some suggestions for improving the research aspects of future rehabilitative programs that might be carried out under circumstances similar to those described herein. Recommendations are made in three general areas: logistics, form revision, and techniques of assessment.

A. Logistics

One of the major problems which beset the present analysis was the high incidence of missing or otherwise unusable data. Despite the provision of training seminars in data collection, frequent staff turnover prevented the degree of continuity and control necessary to obtain the maximum amount of information available. It is also questionable whether many of the interviewers were sufficiently qualified in terms of background, training, or experience to perform the desired research functions. Undoubtedly, many considered data collection to be at best, a tedious chore and at worst, an unnecessary evil.

It seems probable that many of the problems encountered could have been avoided through the provision, at each program site, of a full-time research coordinator responsible for all aspects of data collection for that program. Ideally, such a coordinator would be trained, directed, and employed by the independent agency, government or private, undertaking the research. The major functions of such a coordinator would be to 1) provide continual instruction for interviewers regarding data collection and proper form completion; 2) check all forms for accuracy and completeness; 3) insure the prompt transmission of all data collected to research headquarters for processing and analysis: and 4) serve as a means of communication between research and service functions, thus, hopefully, improving both.

The recommendation to provide a full-time research coordinator at each program site was made at the time the present project was first being planned. This recommendation was rejected on the ground that relationships among clients, counselors, and outside agencies were in delicate balance and might have been seriously disturbed by such a research "intrusion." Regardless of the validity of this argument, it is safe to assume that scientifically adequate research offers the only possibility for effective control of the addiction problem. To compromise this possibility in the interest of highly questionable treatment endeavors cannot, in the final analysis, prove a wise expenditure of society's resources.

B. Form Revision

The current data collection forms, like the proverbial camel, were designed by a committee and hence embody many of the advantages and disadvantages that such a procedure usually entails. In this case, the advantages were several, the disadvantages relatively few. Nonetheless, in the blazing clarity of hindsight, it is apparent that the forms could benefit from substantial revision. It is suggested that changes be made in accordance with the following general principles.

1. Elimination of irrelevant, redundant, or otherwise non-contributory items. A useless item is one that provides no additional valid information. An item may be useless because it is irrelevant, i.e., non-contributory on a priori grounds; it may be useless because the desired information has already been provided by a previous item; it may be useless because the desired information cannot be reliably or validly obtained by the interviewers available; or it may be useless because it has essentially zero variance, i.e., nearly 100% of the responses fall into one category.

A few examples are in order. To begin, it would be difficult to defend the relevance of item 18B-Form II ("If you had your choice of any job, what would you choose?"). Questions providing essentially redundant information are illustrated by items 19B and 19D of Form II ("How many days did you work during the past four weeks?" and "How much did you earn during the past four weeks?"). Item 28-Form II (ratings of client's mood) may be objected to on the grounds that the typical interviewer is unqualified to make reliable and valid judgments in this domain. (Evidence for such a contention is provided by the fact that in some programs nearly all clients were given identical ratings.) Finally, it is clearly pointless to pose a question that yields a single, almost invariable response, e.g., item 19F-Form II ("Do you live on a farm?"). In a similar vein, it is wasteful to devote one-fourth of a page to a matter that is rarely applicable: item 36-Form I (Medical Examination).

As mentioned in a previous chapter, selection of items to be retained for future research may be greatly facilitated through careful scrutiny of the factor-analytic results accompanying this report.

2. Placement of items on the proper form. According to the original plan, items pertaining to the client's background, or yielding

information unlikely to change, were to be placed on Form I (Descriptive Information). Items reflecting improvement or worsening in the client's life situation were to appear on Form II (Evaluative Information). The primary reason for this was to avoid unnecessary and time-consuming recording of essentially redundant information at each monthly evaluation. For unknown reasons, the current forms do not wholly reflect this strategy.

A few examples from Form II should suffice: Items 12 (Marital Status); 18B ("If you had your choice of any job, what would you choose?"); and 19F ("Do you live on a farm?") are particularly illustrative. Although it might be argued that such items could change from one evaluation to the next, it is difficult to see how they could reflect unequivocal improvement or exacerbation of the client's condition. Their inclusion would seem to defy analysis on logical as well as statistical grounds.

3. Uniform and appropriate coding of item responses. It is neither logically satisfying nor mnemonically efficient to employ different codes for similar item responses and vice-versa. A blatant case in point is the current forms' use of the code "0." Sometimes it means "No," sometimes it means "Don't Know," sometimes it means "Not Applicable," and sometimes it even has substantive meaning. Such a practice does not reflect sophisticated form construction, and it can cause confusion, particularly if the form is to be used by relatively untrained interviewers. The use of similar yet not entirely consistent occupational codes and categories (Items 21A, 21B, and 35, Form I; and items 18A and 18B, Form II) is likewise indefensible. With reference to these very same items, even more deplorable is the practice of lumping together categories where discrimination would be highly desirable e.g., unemployed with unskilled, while at the same time providing separate categories for rarely used alternatives, e.g., Higher Executive and Business Manager. In retrospect, it is difficult to see how such gross errors were incorporated in the first place.

The points covered in this section by no means exhaust the number of specific criticisms that might be made. Fortunately, correction of any or all of the present form deficiencies in the interest of future research would be a relatively simple matter.

C. Techniques of Client Assessment

As mentioned earlier, the original plan for assessing degree of client success in treatment required sequential monthly evaluations. When this proved unfeasible (primarily because of inadequate client participation), global judgments of degree of success were requested for those clients who had had more than minimal exposure to program efforts. Unfortunately, this procedure also proved to be less than satisfactory.

The deficiencies in the assessment procedure have already been stated or implied, but they bear repetition. They include the facts that 1) relatively few clients were assessed; 2) assessments

were of doubtful reliability and validity; and 3) global assessments, by their nature, obscure underlying dimensions of change. It is obvious that future assessment efforts should be aimed at minimizing these deficiencies.

Several techniques to accomplish this aim could be employed. One obvious approach would be the specific training of competent interviewers in whatever techniques of assessment are to be utilized. This would increase the likelihood that reliable and valid assessments would be made. Second, the number of clients actually assessed before being lost to follow-up could be dramatically increased by insisting that progress ratings in each of several areas be made at each monthly evaluation point. Unlike the previous practice, these ratings would reflect degree of change from time of admission, thus affording indices of improvement or worsening which would be amenable to statistical anaylsis, irrespective of the presence or absence of intermediary or subsequent evaluations. Third, by rating change in each of several rather independent dimensions, it is likely that areas particularly susceptible (or impervious) to treatment effects could be discerned.

Finally, it does not seem likely that completely adequate assessments of client status or progress will ever be accomplished through the use of relatively untrained interviewers having limited opportunities for client observation. Several other approaches might supply valuable additional information, and these deserve mention at this time.

To begin, it would be wise to administer the Minnesota Multiphasic Personality Inventory (MMPI) (Hathaway and McKinley, 1951; Dahlstrom and Welsh, 1960) on admission as well as at subsequent three-month intervals. It would be inappropriate here to supply a detailed rationale for the choice of this particular instrument: suffice it to say that it is probably the most flexible and well-validated of the adjustment questionnaires available. In addition, it is simple to administer, it is highly amenable to clinical interpretation and statistical analysis, and it is available in a tape-recorded version for illiterates (Wolf, Freinek, and Shaffer, 1964). The cost of administration and scoring is minimal.

A second supplementary approach to client assessment might be accomplished through the use of the Katz Adjustment Scale (KAS) (Katz, and Lyerly, 1963; Michaux et al., 1969). This procedure, which has been used extensively and successfuly to evaluate pre- and post-hospital adjustment of psychiatric patients, utilizes an informant (a friend or relative of the client) as a source of information. This technique yields quantitative scores in over a dozen areas of social and personal adjustment, and these assessments are usually based on more than brief and casual observation. As with the MMPI, the KAS could be obtained on admission as well as at three to six-month intervals thereafter.

A third potentially useful means of assessment in group treatment situations would involve the use of peer ratings. In an excellent

article, Smith (1967) has extensively reviewed and described several fruitful applications of this procedure. In brief, the peer rating technique consists of having each group member "nominate" other group members as displaying much or little of a carefully defined trait. Each member then receives a quantitative score on each trait considered, depending exclusively on the number (and direction) of the nominations he has received. The method seems particularly applicable to groups that have been in existence for at least several weeks and have between 20 and 30 members. All ratings are, of course, made anonymously. In an inpatient or day-care setting, such ratings might be predictive of eventual treatment response. In addition, they could be repeated at regular three-month intervals in a effort to discern client progress. There is evidence to suggest that peer ratings have a greater degree of validity than many alternative assessment procedures because of 1) the special vantage-point of the raters and 2) the increased reliability accruing from the fact that a multiplicity of raters is involved.

In closing, it is felt that a uniform, reliable, and valid system of assessment is perhaps the most essential feature of any experimental treatment program, particularly one designed to cope with a public health problem that has reached epidemic proportions.

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